Environment and Climate Change Canada
Environnement et Changement climatique Canada

Environment and Climate Change Canada

2019–20

Departmental Plan

The Honourable Catherine McKenna, P.C., M.P.
Minister of Environment and Climate Change

Canada

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Minister's message

As the Minister of Environment and Climate Change Canada (ECCC), I am pleased to present the 2019–20 Departmental Plan. This plan outlines strategic actions on a wide range of environmental priorities, recognizes the interdependence between environmental sustainability and economic well-being, builds on partnerships, and facilitates a coordinated approach to achieve results.

Climate change continues to be the most pressing challenge we face. From the increased frequency and severity of extreme weather events, to the thawing of permafrost, Canadians are paying for the cost of climate change. This is why we have a climate plan, the *Pan-Canadian Framework for Clean Growth and Climate Change*, and why we are putting a price on carbon pollution. This is why we have published regulations to reduce methane emissions, to avert future release of hydrofluorocarbons, and to phase-out the use of coal-fired electricity by 2030. We have also made historic investments to support climate actions, such as the $2 billion Low Carbon Economy Fund. The Canadian Centre for Climate Service will help Canadians increase their resiliency to a changing climate, and provide information on local effects of climate change so that they can plan accordingly.

The transition to a low-carbon and resilient economy cannot happen overnight. In 2019-20, we will continue the implementation of our climate plan, in collaboration with provinces, territories and Indigenous peoples. We will also continue to leverage investments and regulatory measures to generate clean growth, reduce greenhouse gas emissions and help meet or exceed Canada's Paris Agreement commitments. We will work with the international community on implementing the ''Paris rulebook" for ensuring transparent and credible climate action and accountability and will help to deliver on Canada's pledge of providing $2.65 billion by 2020-21 to help developing countries transition to low-carbon, climate-resilient economies through investments in clean technology, climate-smart agriculture and other initiatives. Canada's National Air Quality Management System demonstrates the strength of cooperation with provinces and territories to improve air quality, and we will continue to reduce emissions to protect Canadians from harmful pollutants through new and stronger standards for emissions and for ambient air quality.

Reducing marine litter, including plastics, requires a global response and ECCC, in collaboration with other departments, will work to implement commitments and actions under the Charlevoix Blueprint for Healthy Oceans, Seas and Resilient Coastal Communities and the Ocean Plastics Charter. This includes moving to 100 per cent reusable, recyclable or, where viable alternatives do not exist, recoverable plastics by 2030, and working with industry to increase the recycled content of plastic products by at least 50 per cent. Canada announced it will invest $100 million to prevent plastic waste from entering the oceans, address plastic waste on shorelines, and better manage existing plastic resources in developing countries Canada is also taking direct actions at home including through the Canadian Plastic Innovation challenge, which will provide funding of up to $12.85 million to Canadian innovators and businesses to develop innovation technologies to reduce plastic waste.

We will continue to work with Canadian and U.S. partners to protect and improve Canada's freshwater resources, including the Great Lakes, St. Lawrence River and Lake Winnipeg watersheds, through science-based research and monitoring, and by investing in actions that reduce nutrient pollution.

Working with partners, we have made good progress towards conserving 17 per cent of Canada's lands and inland waters and 10 per cent of coastal and marine areas by the end of 2020. With historical federal funding for conservation, we will continue to expand and manage our Migratory Bird Sanctuaries and National Wildlife Areas. The $500 million Canada Nature Fund will support Indigenous organizations, non-profits, provinces and territories and others to protect and conserve Canada's terrestrial and aquatic ecosystems, landscapes and biodiversity, including species at risk. This Fund will be matched by philanthropic foundations, corporate, not-for-profit, provincial, territorial and other partners to raise a total of $1 billion for conservation action and lead to the establishment of more provincial, territorial, Indigenous, and municipal protected and conserved areas, as well as private lands across the country.

Federal, Provincial and Territorial governments have agreed to transform the way we conserve species at risk by shifting to more ecosystem-based, multispecies approaches, focussing on a national set of shared priority places, species and sectors, along with place-based conservation initiatives to deliver on the ground action. Collaborative work will continue to advance the protection and recovery of Canada's Boreal and Southern Mountain Caribou herds, amongst other priority species at risk.

ECCC will continue to bring leading-edge technology and science together to provide timely and accurate forecasts on which Canadians, businesses, communities and others rely to make health and safety decisions. The Department will upgrade its vital infrastructure, including the replacements of 12 radars by 2019-20. This will enable improved forecasts overall, as well as for extreme weather events such as storms, floods and droughts. Canadians will continue to have access to the WeatherCAN application which was launched on February 14, 2019, and use ECCC's forecasts to plan ahead.

Science-based decision-making in essential to our work. It supports our contributions to the Oceans Protection Plan, our advice on biodiversity and sustainability. It will guide our decisions under the new *Impact Assessment Act,* and our regulatory activities, to name but a few. In recognition of this, we have recently adopted a Policy on Scientific Integrity, and are in the process of appointing a Departmental Science Advisor.

We have an ambitious program ahead of us. I invite you to read this Plan for details on the priorities of ECCC, and our commitment to deliver on them as we work towards a cleaner and more prosperous future.

The Honourable Catherine McKenna, P.C., M.P.
Minister of Environment and Climate Change

Plans at a glance and operating context

Environment and Climate Change Canada (ECCC) is the lead federal department for strategic action on a wide range of environmental matters, including action on clean growth and climate change, preventing and managing pollution, conserving nature, and predicting weather and environmental conditions. The Department's program focus reflects the interdependence between environmental sustainability and economic well-being.

Operating Context

Protecting and conserving the environment requires ECCC's commitment and action, as well as that of federal government partners, provinces and territories, Indigenous peoples, business and industry, and individual Canadians. International partners are also vital to addressing Canadian and global environmental challenges. Effective engagement with partners and stakeholders helps ECCC to advance innovative and effective policies, regulations and services, facilitates a coordinated approach to achieve results that represent the interests of all partners, and allows ECCC to be more responsive to evolving environmental challenges and circumstances, such as is often observed when addressing global climate change and protecting species at risk.

ECCC will remain focused on commitments set out in the Prime Minister's mandate letter to Minister McKenna, many of which are outlined in the priorities and related actions described below.

In pursuit of its commitments, the Department will continue to experiment[i] to reflect the federal culture of measurement, evaluation and innovation in delivering its mandate, and will integrate Gender-Based Analysis Plus[ii] (GBA+) principles into its analysis to ensure that the Department is better positioned to serve Canadians equitably.

Taking Action on Clean Growth and Climate Change

Addressing climate change is one of the Government of Canada's top priorities. The impacts of climate change are being felt across the country, from floods, droughts, forest fires, and heat waves to a thawing Arctic. The costs associated with disaster response and recovery are also increasing. Between 1983 and 2008, insurance claims from extreme weather averaged $400 million a year. Between 2009 and 2017, those costs quadrupled to an average of $1.8 billion a year.

In 2016, the Government of Canada worked with provinces and territories, and engaged with Indigenous peoples and Canadians to develop the Pan-Canadian Framework on Clean Growth and Climate Change, Canada's plan to reduce greenhouse gas emissions (GHGs) by 30% below 2005 levels by 2030. This plan contains over 50 concrete measures to drive down emissions, build resilience to a changing climate, and create a clean economy. Governments have made tremendous progress in realizing this plan, but more needs to be done to ensure Canada remains on a path to meet its Paris Agreement target. As such, the implementation of the Pan-Canadian Framework on Clean Growth and Climate Change will continue to be a key priority for the Department.

In 2019–20, ECCC will:

- Ensure pollution is no longer free, and stimulate clean innovations and energy efficiency by implementing the federal carbon pollution pricing system. ECCC will also work with other government departments and agencies to ensure that proceeds will go directly

back to the people of these provinces through the Climate Action Incentive and the provision of funds for small- and medium-sized enterprises, not-for profit organizations, municipalities, universities, schools, hospitals, and Indigenous communities to, for example, help them become more energy efficient and reduce emissions.

- Continue to leverage investments in projects that will generate clean growth and reduce GHGs through the $2 billion Low Carbon Economy Fund (LCEF), including working with provinces and territories to identify opportunities for partnership under the Leadership Fund. To date, 37 projects, totalling over $1.1 billion, have been approved under the Low Carbon Economy Leadership Fund across 9 provinces and territories. In addition, the LCEF Challenge Fund ($500M) provides funding to provinces and territories, municipalities, Indigenous communities and organizations, businesses and not-for-profit organizations, and small municipalities.
- Reduce GHGs and drive clean growth through the development and implementation of key regulations, such as the Clean Fuel Standard, which is expected to cut 30 million tonnes of pollution every year by 2030.
- Continue to support meaningful engagement between the Government of Canada and representatives of Indigenous peoples and governments to ensure that Indigenous peoples are full and effective partners in advancing clean growth and addressing climate change goals. ECCC will engage Indigenous peoples in implementing the PCF, including through senior and distinct tables with the Assembly of First Nations, Métis Nation and Inuit Tapiriit Kanatami, as well as in consultation with the women's councils of these organizations and the Native Women's Association of Canada.
- Support the implementation of a range of adaptation efforts to help all levels of government, communities, Indigenous peoples, businesses and individuals make informed decisions and be better prepared for the impacts of climate change.
- Take steps to strengthen Canadians' and their communities' capacity to adapt so that they can better withstand the impacts of climate change, though key initiatives such as Canadian Centre for Climate Services, which helps Canadians understand and plan for climate impacts.
- Continue to champion and demonstrate global leadership on climate action by encouraging the implementation of the Paris "rulebook" to guide pledges, action and accountability of all signatories to the Paris Agreement. ECCC will also continue to help to deliver on Canada's pledge of $2.65 billion by 2020-21 to help developing countries transition to low-carbon, climate-resilient economies through investments in clean technology, climate-smart agriculture, and other initiatives.

Preventing and Managing Pollution

Building on the progressive work undertaken with provinces and territories under Canada's Air Quality Management System, ECCC will continue to reduce emissions from a range of sources and protect Canadians from harmful pollutants by developing more stringent ambient standards for air quality.

To contribute to global commitments and efforts to reduce marine litter, including plastic waste, ECCC will work with provinces, territories, and other partners to achieve targets under the Ocean Plastics Charter, [iii] including those under the Strategy on Zero Plastic Waste to achieve 100% reusable, recyclable or recoverable plastics by 2030, and to increase the recycled content of plastic products by at least 50% by 2030. The Government of Canada will also invest $100 million to prevent

plastic waste from entering the oceans, address plastic waste on shorelines, and better manage existing plastic resources in developing countries including $65 million through the World Bank for an international fund to address plastic waste in developing countries, $6 million to strengthen public-private partnerships to support global action in plastic pollution hot spots, and $20 million in support for the G7 Innovation Challenge to Address Marine Plastic Litter. Canada is also taking direct actions at home through the Canadian Plastic Innovation challenge, which will provide funding of up to $12.85 million to Canadian innovators and businesses to develop innovation technologies to reduce plastic waste.

ECCC will continue its work with Canadian and U.S. partners to protect and improve Canada's freshwater resources, including the Great Lakes, St. Lawrence River and Lake Winnipeg watersheds, through its science-based research and monitoring, and by investing in actions that reduce nutrient pollution in these waters that support tens of millions of Canadians.

The Department will apply its scientific expertise and advice to Canada's Oceans Protection Plan,[iv] including support for a state-of-the-art safety system to preserve and restore Canada's marine ecosystems. For example, the Department's data and modelling contributions will support environmental sensitivity assessments to help protect marine birds on British Columbia's north coast.

Conserving Nature

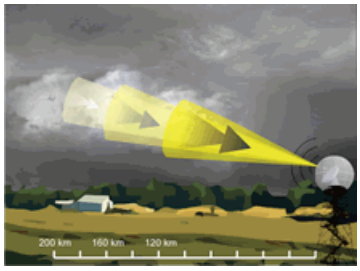
ECCC will continue to collaborate with partners to conserve 17% of Canada's lands and inland waters (10.55% as of December 2018), and 10% of coastal and marine areas (7.9% as of December 2018) by 2020. With significant federal funding ($1.35 billion between 2018-19 and 2022-23) to support its efforts, the Department will continue to:

- Expand existing federal protected areas as both Migratory Bird Sanctuaries and National Wildlife Areas;
- Collaborate with federal, provincial and territorial ministers responsible for nature and habitat to meet the commitments set out in Canada's Natural Legacy Declaration, while also working in the spirit and practice of reconciliation with Indigenous peoples; and
- Fund initiatives that conserve spaces and species under the $500 million Canada Nature Fund, beginning with support to establish Territorial and Municipal Protected Areas, and Indigenous Protected Areas.

ECCC will transform the way species at risk are conserved through a new ecosystem-based, multispecies approach. The Department will partner with and support provinces and territories in their leadership role to recover and protect species at risk on their lands, and will also partner with Indigenous peoples to establish plans to recover and protect Canada's Boreal and Southern Mountain Caribou herds.

Under the proposed *Impact Assessment Act*, ECCC will continue to provide scientific expertise and advice related to climate change, air quality, water quality, environmental preparedness and emergencies, and biodiversity. This will include: developing guidance for project proponents on standard methodologies to address common issues such as species at risk, migratory birds and wetlands issues; contributing advice on strengthening a federal offsets framework that encompasses biodiversity and developing datasets and science products to inform decisions on the assessment of impacts.

Predicting Weather and Environmental Conditions



ECCC will continue to bring leading-edge technology and science together to provide timely and accurate forecasts on which Canadians, businesses, communities and others rely to make health and safety decisions. The Department will upgrade its vital infrastructure, including 12 radars in 2019 –20, to contribute to more reliable weather information for businesses, communities and individuals.

Canadians will continue to have access to the WeatherCAN[v] application and use ECCC's forecasts to plan ahead. The application provides current conditions and push notifications for weather alerts issued by the department for locations anywhere in Canada. It also provides quick access to ECCC's dynamic radar image.

For more information on Environment and Climate Change Canada's plans, priorities and the planned results, see the "Planned Results" section of this report.

Planned results: what we want to achieve this year and beyond

Core Responsibilities

Core Responsibility: 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.

Planning highlights

Implementing the Pan-Canadian Framework on Clean Growth and Climate Change

Climate change is recognized as today's defining issue, with impacts being felt across Canada and around the world. In recent years, we've seen floods from downtown Toronto to Cape Breton Island. Last year, spring in Manitoba brought with it one of the worst droughts on record, dramatically elevating feed prices for farmers. In Montréal, more than 50 people died from a heat wave in the summer of 2018. Forest fires have devastated parts of B.C. and Alberta. These events are becoming more frequent, more devastating for Canadians, and more expensive in terms of both disaster response and recovery.

Taking action on climate change will help address these growing social and economic costs. It is also the key to succeeding in a new low-carbon economy. Meeting the global challenge of climate change is an opportunity to mobilize our skilled workers, natural resources and fast-growing tech sector to fight climate change while creating good jobs and opening up new opportunities for Canadians.

Two years ago, governments, Canadians, and Indigenous peoples came together to inform and develop the country's first national climate plan. The Pan-Canadian Framework (PCF) is Canada's plan to reduce GHGs to 30% below 2005 levels by 2030 and position Canada to be competitive in the clean economy. In its 2018 GHG and Air Pollutant Emissions Projections report, Canada's GHG emissions are projected to decline over the next 12 years. A wide range of policies, programs and investments implemented under Canada's climate plan have led to the biggest improvement to Canada's emissions outlooks relative to pre-PCF projections encompassing all economic sectors, and demonstrating the effectiveness of Canada's climate plan.

Governments have been implementing this plan for the past two years and have made tremendous progress. Since 2016, we have:

- Introduced regulations to reduce methane emissions in the oil and gas sector, which will reduce carbon pollution by about 16.5 million tonnes per year.

- Accelerated the phase-out of coal-fired electricity.
- Reduced and prevented the release of hydrofluorocarbons into the environment.
- Invested in energy efficiency to help families and businesses save money.
- Set increasingly stringent emissions standards for heavy-duty vehicles, and are taking steps to reduce emissions from light-duty vehicles and improve efficiency in the rail, aviation, marine and off-road sectors.
- Expanded public transit across the country.
- Improved building codes and standards to enable Canadian homes to use less energy.
- Made historic investment in clean technology, innovation, and green infrastructure to drive growth and reduce pollution.

The PCF is working. Canada's most recent projections show that emissions in 2030 are expected to be 223 million tonnes lower than projected prior to the adoption and implementation of Canada's climate plan. This improvement in Canada's emissions outlook reflects the breadth and depth of our climate plan.

However, the Government of Canada recognizes there is more work to be done and that the transition to a low-carbon economy does not occur overnight. ECCC will continue to bring provinces, territories, Indigenous peoples, domestic and international stakeholders, other federal departments together to ensure the successful implementation of the PCF.

Carbon pollution pricing

Pricing carbon pollution is widely recognized as one of the most cost-effective ways to reduce GHG emissions and create incentives for innovation and clean growth. Putting a price on carbon pollution sends an important signal to markets and provides incentives to reduce energy use through conservation and efficiency measures.

The federal carbon pollution pricing system includes a charge on fossil fuels and a regulated trading system for large industry-the Output-Based Pricing System. In the provinces where the federal system applies, the Output-based Pricing System took effect on January 1, 2019 and the fuel charge will take effect April 2019. Carbon pollution pricing will apply in the territories in July 2019. As committed to in the Pan-Canadian Framework, there will be an interim report on carbon pollution pricing in Canada in 2020 and a final review in 2022 to help inform the path forward.

Leveraging investments through the Low Carbon Economy Fund

To support actions under the Pan-Canadian Framework, the Government of Canada established the Low Carbon Economy Fund to leverage investments in projects that will generate clean growth, reduce greenhouse gas emissions and help meet or exceed Canada's Paris Agreement commitments. ECCC will continue to implement the $2 billion Fund and work with provinces and territories to identify further opportunities for partnership.

A further $500 million in funding is available under the Low Carbon Economy Challenge in support of projects administered by provinces and territories, municipalities, Indigenous communities and organizations, businesses and not-for-profit organizations to achieve GHG reductions, contribute to clean growth, save energy, and create jobs.

Strengthening the regulatory agenda

ECCC will continue to develop and implement regulatory measures to combat climate change, including regulations aimed at reducing GHGs and short-lived climate pollutants. ECCC will:

- Publish draft regulations for the liquid fuels component of the Clean Fuel Standard;
- Implement regulations amending the *Heavy-duty Vehicle and Engine GHG Emission Regulations* that are projected to reduce GHG emissions by approximately 6 Mt annually starting in 2030;
- Implement regulations reducing the release of methane and certain Volatile Organic Compounds (VOC) from the upstream oil and gas sector that aim to reduce methane emissions by about 20 Mt by 2025 relative to the estimated 2012 levels of 45 Mt CO2e; and
- Implement amendments for coal-fired electricity generation regulations that will reduce GHG emissions by 12.8 Mt in 2030, as well as natural gas-fired electricity generation regulations.

Building Canada's resilience to a changing climate

Even as governments work to address climate change, Canadians are feeling its impacts. That is why the PCF includes actions to help Canada and its communities adapt and prepare for the challenges that lie ahead.

ECCC will continue to help all levels of government, communities, non-governmental organizations, Indigenous peoples, businesses and individuals make informed decisions in order to be prepared for the impacts of climate change. In addition, the federal, provincial and territorial Adaptation Policy Committee, chaired by the Department under the Canadian Council of Ministers of the Environment,[vi] will continue to advance its program of work on adaptation, including work related to natural infrastructure, assessing risks associated with climate change, and measuring progress.

The new Canadian Centre for Climate Services[vii] (CCCS) was established in 2018–19 so that Canadians can access the information and support the need to build resilience to climate change. The CCCS website contains a suite of data and resources, including basic information to help Canadians better understand climate change, access to Environment and Climate Change Canada's climate data through an interactive map and the ability to download authoritative climate datasets, and a Library of Climate Resources to access information from other sources that support adaptation decision-making. Additionally, an operational Climate Services Support Desk, available during business hours by e-mail and telephone, helps guide users in finding or using climate information.

ECCC will continue to build and expand the CCCS by:

- collaborating with regional climate organizations, Indigenous peoples, provinces and territories to establish regional climate service hubs;
- offering training; and
- enhancing users' capability to access and manipulate climate data, particularly for decision makers and planners who need application-ready climate data in developing adaptation plans at the regional and local levels.

Science-based policy and Engagement

Recognizing the foundational role of science in evidence-based decision-making, ECCC will develop a National Climate Change Science and Knowledge Plan (National Plan) to support the delivery of the PCF. The National Plan will identify knowledge gaps and priorities that reflects the perspectives of stakeholders across the Canadian scientific community, including Indigenous communities, and other levels of government. When released in 2020–21, the National Plan will support better coordination and increased collaboration between federal and academic science, strengthened by indigenous knowledge.

The Department will continue to work with Indigenous peoples in the implementation of the PCF through senior and distinct tables with the Assembly of First Nations, Métis Nation and Inuit Tapiriit Kanatami. The Department will also continue to work with its partners to better involve and respond to the input from Indigenous women, elders and youth.

Expert Panel on Sustainable Finance

The Minister of Environment and Climate Change and the Minister of Finance established the Expert Panel on Sustainable Finance in April 2018 to consult with financial market participants on the topic of sustainable finance. The Panel has since consulted hundreds of participants and published an interim report in October 2018. The Panel plans to release their final report in spring 2019 with recommendations for the federal government to advance sustainable finance. The report will help support Canada's climate change goals by recommending actions on ways to collaborate with the private sector, especially mainstream capital markets, to help form a foundation for long-term sustainable economic growth consistent with the goals of the Paris Agreement.

New ECCC Science Advisor

To foster scientific excellence and science-based decision-making, ECCC will establish a new Departmental Science Advisor (DSA) position to lead and support high-quality scientific research across the Department and help make ECCC science available to Canadians. The role will strengthen the linkage between science and policy decisions, improve collaboration across sectors and partners, and reinforce the commitment to base decisions on the best scientific advice available.

A process to hire the DSA was launched in December 2018 and a DSA is expected to be in place in 2019–20.

International Action on the Environment and Climate Change

Contributing to Paris Agreement implementation

ECCC will continue its leadership role in implementing the Paris Agreement, which Canada ratified in October 2016. The Agreement reflects an international commitment to increase the global response to climate change. Since 2016, Canada has been working with international partners to develop implementation guidance for the Paris Agreement in order to allow the agreement to become fully operational. These guidelines, the "Paris rulebook", outline how Parties will deliver on their commitments, such as communicating, measuring, and reporting on climate efforts and progress and were adopted at the December 2018 COP 24 in Katowice, Poland (24th Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change). At COP 24, Canada further built the trust and confidence needed for an ambitious international climate change regime. Canada will continue to be a leader in ensuring Indigenous peoples are engaged in developing climate policy, and for promoting gender equality and the role of women in climate action around the world.

Canada continues to advance its commitments under the Paris Agreement and to transition to a low carbon economy by working with partners bilaterally and multilaterally. Bilateral partnerships include: the Canada-United Kingdom (UK) Partnership on Clean Growth and Climate Change; the Canada-France Climate and Environment Partnership; the North American Climate Leaders' Dialogue; and, the Canada-China Ministerial Dialogue on Climate Change. In particular, as part of the Canada-UK Partnership, Canada and the UK co-launched, in November 2017, the Powering Past Coal Alliance (PPCA), which brings together a diverse range of governments, businesses and organizations to take action to accelerate clean growth and climate protection through the rapid phase-out of coal power. Canada also continues to pursue its commitment to reducing greenhouse gas emissions and short-lived climate pollutants, and to improving air quality, by continuing to work multilaterally in fora such as the Climate and Clean Air Coalition.

Reflecting clean growth and climate change in trade agreements

Canada continues to reflect its clean growth and climate change commitments in agreements with key trade partners, including with the United States, Mexico, the European Union, and MERCOSUR. Canada upholds its environment and trade obligations by including Environment Chapters, which are stand-alone chapters that reaffirm mutual commitments to environmental protection, in each of its trade agreements.

Supporting developing countries to reduce emissions and adapt to climate change

Developing countries are the hardest hit by climate change and many have limited capacity to prevent and cope with its consequences. In partnership with Global Affairs Canada, ECCC will continue to deliver on Canada's pledge of $2.65 billion by 2020–21 to help developing countries transition to low-carbon, sustainable and resilient growth. The Department will continue to deliver through various multilateral and bilateral initiatives, including the Green Climate Fund, the largest dedicated international climate change fund (under the United Nations Framework Convention on Climate Change). Funds will target sectors such as clean technology and renewable energy, climate-smart agriculture and forest management, and risk insurance and

capacity building, with special consideration for the poorest and most vulnerable developing countries. Canada's climate finance is consistent with its feminist international assistance policy to promote gender equality and help empower all women and girls.

Under the auspices of individual bilateral agreements, ECCC will continue to support eight developing countries through the implementation of their Nationally Determined Contributions (NDCs) in key sectors such as solid waste and oil and gas.

Indigenous peoples and gender in the international arena

Canada has been recognized for playing a leadership role internationally to promote and encourage action under the Paris Agreement—including by launching the local communities and Indigenous peoples platform and the adoption of the Gender Action Plan under the UNFCCC (at COP23) in November 2017. Canada will continue to be a leader in ensuring Indigenous peoples, and their rightful voice, are heard when developing climate policy, and in promoting gender equality and the role of women in climate action at the global level.

Global Commission on Adaptation

Recognizing the importance of mobilizing action on climate change adaptation, which is an integral part of Canada's domestic and international climate change efforts, Canada joined the Global Commission on Adaptation as a convening nation on October 16, 2018. The Global Commission on Adaptation is a new initiative spearheaded by the Netherlands with the goal of elevating the political visibility of climate change adaptation by bringing together strong global adaptation thought leaders with a focus on identifying and encouraging solutions. The Minister of Environment and Climate Change Canada is Canada's commissioner for this important initiative.

Planned results

Departmental Results: Canadian greenhouse gas and short-lived climate pollutant emissions are reduced					
Departmental result indicators	**Targets**	**Date to achieve target**	**2015–16 Actual results**	**2016–17 Actual results**	**2017–18 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	Not available	7.6% improvement (2014 model year reporting)	10.2% improvement (2015 model year reporting)
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: •13%: heavy-duty pick-up trucks and vans •11%: Combination Tractors •5%: Vocational vehicles	2020	Not available This is a new indicator. Results are not available for these years		

Departmental result indicators	Targets	Date to achieve target	2015–16 Actual results	2016–17 Actual results	2017–18 Actual results
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	Emissions total: 38 Kt in 2015 (10% reduction from baseline)	Emissions total: 35 Kt in 2016 (18% reduction from baseline)	Results are expected in summer 2019.
HFC emissions	10% reduction in consumption relative to 2017–18 levels	2019	Not available 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	Not available This is a new indicator. Results are not available for these years.		
Emissions reductions are being achieved under the Clean Fuel Standard building on the Renewable Fuels Regulations	30 Mt annual GHG emissions reduction in 2030	2030	Not available 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	Not available 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	Not available This is a new indicator. Results are not available for these years.		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.
GHG emissions from ECCC operations	40% GHG emissions reduction relative to 22,793 tonnes in 2005–06[1]	2030–31	10.3%	23.1%[2]	24.6%

[1] 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.
[2] 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.

Departmental Results: Indigenous peoples are engaged in clean growth and climate change					
Departmental result indicators	**Targets**	**Date to achieve target**	**2015–16 Actual results**	**2016–17 Actual results**	**2017–18 Actual results**
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.	March 31, 2020	Not available This is a new indicator. Results are not available for these years.		
Departmental Results: Canada contributes to reducing greenhouse gas emissions and increasing climate resilience globally					
Departmental result indicators	**Targets**	**Date to achieve target**	**2015–16 Actual results**	**2016–17 Actual results**	**2017–18 Actual results**
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	Long term cumulative indicator	Not available 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	Not available This is a new indicator. Results are not available for these years.		An estimated reduction of 24.8 Mt of GHGs is expected from funds delivered so far.
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	Not available This is a new indicator. Results are not available for these years.		An estimated 650,000 people with increased resilience are expected from funds delivered so far.
Departmental Results: Canadian communities, economies and ecosystems are more resilient					
Departmental result indicators	**Targets**	**Date to achieve target**	**2015–16 Actual results**	**2016–17 Actual results**	**2017–18 Actual results**
Number of individuals, businesses, and governments accessing climate services and using that information to inform decision-making[3]	Increase from baseline[4]	March 31, 2021	Not available This is a new indicator. Results are not available for these years.		

[3] 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.
[4] Baseline will be established when the Canadian Centre for Climate Services (CCCS) has been functioning for one full year. It is expected that the CCCS will become operational in 2018–19, thus baseline will be set in 2019–20.

Budgetary Financial Resources (dollars)*

2019–20 Main Estimates	2019–20 Planned spending	2020–21 Planned spending	2021–22 Planned spending
704,736,084	704,736,084	567,287,153	418,472,197

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

Human Resources (Full-Time Equivalents—FTEs)*

2019–20 Planned	2020–21 Planned	2021–22 Planned
539	527	517

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

Core Responsibility: Preventing and Managing Pollution

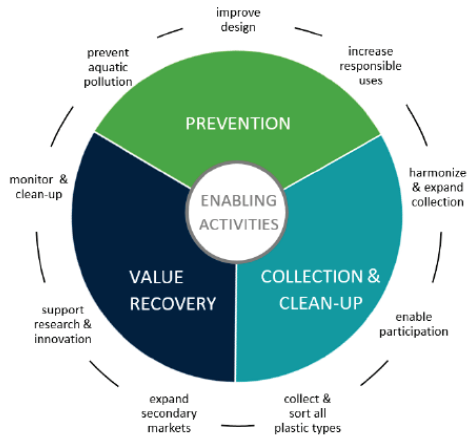
Description

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.

Planning highlights

Protecting the environment from pollutants and other harmful substances, and reducing their impacts on human health, is central to ECCC's work. The Department will continue to collaborate with partners in Canada and other jurisdictions to monitor and address substances, including by enforcing regulations under the *Canadian Environmental Protection Act* and the *Fisheries Act*.

Moving Toward Zero Plastic Waste



Addressing the serious global problem of plastic waste and marine litter is a priority for ECCC. In 2018, through the Canadian Council for Ministers of the Environment[viii] (CCME), ECCC collaborated with provinces and territories to develop a Canada-wide Strategy on Zero Plastic Waste.[ix] The Strategy aims to eliminate plastic waste as Canadians move to a more circular and low-carbon economy, in which we use our valuable natural resources as efficiently as possible. To implement the CCME Strategy, ECCC will work with provinces, territories, industry, and other partners to develop a national zero plastic waste action plan. In addition, the Department will support federal government commitments made in 2018 to divert at least 75 per cent of plastic waste from government operations by 2030.

ECCC will also collaborate with other federal departments and agencies, provinces, and territories to finalize a domestic plastics science agenda in 2019-20. The science agenda will set priority areas for research and monitoring that can help inform Canada's policy actions and decisions about innovative solutions to the challenge of plastic waste.

In 2019-20, the Department will continue to champion the Ocean Plastics Charter,[x] launched during Canada's G7 Presidency in 2018. The Charter's key targets include working with industry and other partners to achieve 100% reusable, recyclable or, where viable alternatives do not exist, recoverable plastics by 2030, and increasing recycled content in plastic products where applicable by at least 50% by 2030. The Charter creates a strong basis for further global mobilization to make concrete progress on this issue. Since the adoption of the Charter, additional endorsements have come from Cabo Verde, Jamaica, Kenya, Mexico, Nauru, the

Netherlands, Norway, Palau, the Republic of the Marshall Islands, Senegal, as well as 20 businesses and organizations including Unilever, Ikea, Nestlé and Volvo.

Canada will invest $100 million to prevent plastic waste from entering the oceans, address plastic waste on shorelines, and better manage existing plastic resources in developing countries including $65 million through the World Bank for an international fund to address plastic waste in developing countries, $6 million to strengthen public-private partnerships to support global action in plastic pollution hot spots, and $20 million in support for the G7 Innovation Challenge to Address Marine Plastic Litter. Canada is also taking direct actions at home through the Canadian Plastic Innovation challenge, which will provide funding of up to $12.85 million to Canadian innovators and businesses to develop innovation technologies to reduce plastic waste.

Protecting the environment and Canadians from harmful substances

ECCC will continue to protect Canadians from harmful substances by delivering Canada's Chemicals Management Plan[xi] with Health Canada. By March 2021, the remaining 1,100 of 4,300 priority chemicals will be assessed and managed (as required) to protect the environment and the health of Canadians. Since the launch of the Chemicals Management Plan in 2006, the Government of Canada has implemented over 90 risk management actions for existing chemicals. The Department will also continue to develop and apply new methods for assessing and managing the risks associated with chemicals of emerging concern.

Asbestos can cause life-threatening diseases, such as asbestosis, mesothelioma, and lung cancer. To protect the health of Canadians, the Department published the *Prohibition of Asbestos and Products Containing Asbestos Regulations* and related amendments to the *Export of Substances on the Export Control List*. Together, they prohibit the export, import, sale, and use of asbestos and products containing asbestos, as well as the manufacture of products containing asbestos, with a limited number of exclusions. The regulations and related amendments came into force on December 30, 2018, and will be implemented and enforced in 2019.

The Department is also increasing research, strengthening regulatory controls, and enhancing enforcement of environmental regulations to reduce contaminants affecting endangered whales including the Southern Resident Killer Whale and the St. Lawrence Estuary Beluga.

The Department will collaborate with Health Canada to develop a performance measurement strategy for chemicals management that will establish a long-term approach to systematically assess the effectiveness of actions to control toxic substances. In consultation with stakeholders and the public, ECCC and Health Canada will also work to set new directions and objectives for chemicals management for the post 2020 period. The Department will develop new regulations to manage risks from the release of effluents from coal mining and oil sands operations.

The management of pollution takes place in a complex and dynamic domestic and international context. ECCC will continue to scan the environment and work closely with its partners to ensure the efficacy of its policies and regulations. ECCC will also continue to engage in international agreements aimed at protecting human health and the environment from harmful substances and waste.

Reducing air pollution and improving air quality

Air pollution is a significant global risk to human health and the environment. Even at low levels, air pollution can impact health, especially that of children, the elderly, and those with health concerns. Improving air quality for Canadians remains a priority for ECCC, including by working to reduce harmful emissions in Canada and collaborating with international partners to reduce transboundary air pollution through such mechanisms as the Canada-U.S. Air Quality Agreement[xii] and the Convention on Long-Range Transboundary Air Pollution.

The Department will continue to work closely with provinces and territories through the Air Quality Management System[xiii] to develop more stringent ambient standards for air quality, and to monitor and report on air quality for Canadians. The Government of Canada will move forward with a number of initiatives to reduce air emissions.

The *Multi-sector Air Pollutants Regulations* (MSAPR), designed to reduce air pollution from industrial boilers and heaters, cement manufacturing, and stationary spark-ignition engines, were published in June 2016. Over the 2016–2035 period, the Department estimates that the Regulations will reduce emissions of nitrogen oxides by about 2,000 kilotonnes.

ECCC will develop the Off-Road Compression-Ignition (Mobile and Stationary) and Large Spark-Ignition Engine emission regulations, implement Tier 3 under the *On-Road Vehicle and Engine Emission Regulation*, and implement amendments to the *Off-Road Small Spark-Ignition Engine Emission Regulations*, which came into force on March 22, 2018.

Protecting Canada's freshwater resources

Canada's Great Lakes, Lake Winnipeg and the St Lawrence River watersheds will remain an important focus of ECCC's work. These precious resources make a significant contribution to the health and well-being of tens of millions of Canadians, and the Department will continue to work with other federal, provincial, municipal, the United States and Indigenous partners to protect and invest in them. The Department will support these efforts with scientific research and monitoring to understand and reduce nutrient pollution, and to study the effects of water availability and quality on ecosystem health.

ECCC will continue to implement the Great Lakes Protection Initiative,[xv] which addresses the most significant environmental challenges affecting the Great Lakes by delivering on commitments under the *Canada—United States Great Lakes Water Quality Agreement* (GLWQA). Together with other federal departments and the United States, in 2019 the Department will report on progress in implementing the GLWQA as well as on the state of Great Lakes water quality and ecosystem health. Under the GLWQA, and through the *Canada—Ontario Agreement on Great Lakes Water Quality and Ecosystem Health* (COA), the Department will continue to work with the Province of Ontario to implement these agreements, as well as the Canada—Ontario Lake Erie Action Plan to reduce phosphorus loads from Canadian sources. The Department will also consult on a new COA in 2019.

Cleaning up Hamilton Harbour

ECCC will continue its work to clean up Randle Reef[xiv] and restore Hamilton Harbour. The Department leads the collaboration with the Province of Ontario, Stelco, Hamilton Port Authority, City of Hamilton, City of Burlington and Halton Region that will see 695,000 m^3 of contaminated sediments contained in a 6.2 hectare engineered containment facility by 2020.

The project will finish with the construction of an impermeable cap, after which the facility will be turned over to the Hamilton Port Authority for development of port facilities over the long term. Fish, wildlife and people in the area will all benefit from the improved water quality. The Department's contribution of $46 million represents one third of the total investment of $140 million by partners, and the project is expected to generate over $150 million in economic benefits.

Priority actions for 2019–20 include: supporting projects that use innovative approaches and new technologies to reduce phosphorus loads in Lake Erie and promote broader uptake by others; assessing the vulnerability of Great Lakes coastal wetlands to climate change and other stressors; assessing Great Lakes nearshore waters to identify areas of high ecological importance and areas under high cumulative stress; engaging Canadians through Citizen Science; and, implementing binational strategies to reduce releases of Chemicals of Mutual Concern[xvi] to the Great Lakes basin. The Department will continue work to restore beneficial uses of the environment across all 14 remaining Great Lakes Canadian Areas of Concern[xvii] (AOCs).

ECCC will continue its priority work under the Canada-Québec Agreement on the St. Lawrence (St. Lawrence Action Plan 2011–2026[xviii]) to conserve, restore, protect and develop the St. Lawrence River. Monitoring that is already underway will continue, and the Department will collect and analyze data on 21 indicators of water quality, publishing results in 2020-21 on the current state and evolution of the St. Lawrence River.

With partners and stakeholders, ECCC will continue work to reduce nutrient loading in the Lake Winnipeg Basin, including by funding action and collaboration with Indigenous governments and communities, non-government organizations and others. Among its priority actions, the Department will collaborate on actions important to the long-term management and protection of Lake Winnipeg, including a new Canada-Manitoba Memorandum of Understanding Respecting Lake Winnipeg and the Lake Winnipeg Basin, and continuing support of the development of nutrient objectives and targets in key transboundary waterways.

In other major basins, such as the Saint John River (Wəlastəkw) watershed, the department will continue efforts to increase coordination and collaboration with other governments, Indigenous people and stakeholders to identify and advance water quality and ecosystem priorities, goals and objectives.

The Department will also complete an Ottawa River Watershed Study[xix] undertaken in response to a Parliamentary motion passed in May 2017. The purpose of the study is to examine the natural, cultural, heritage and economic values associated with the Ottawa River watershed, important indicators for assessing the health of the Ottawa River watershed.

To further protect Canada's freshwater resources, ECCC will prepare for consultations on proposed regulations to modernize *Pulp and Paper Effluent Regulations*. New *Environmental Emergency Regulations* will be published in 2019, and the Department will support industry to comply with these strengthened regulations when they come into force.

Experimentation — Sentencing Recommendations

ECCC continues its initiative to strengthen sentencing recommendations. While the initiative will continue for another year, preliminary results show excellent progress. In 2017-18, the total fine amount was $10.47 million—up 130% over annual averages in the previous five years. The median fine amount was $35,000 in 2017–18—up 8% over the median fine average over the previous five years. However, given the variability in case severity and conclusions from year to year and since the initiative is still in progress and constantly evolving, these results could differ in the near future. The use of creative sentencing and court orders is also on the rise, compelling companies to make investments and change processes to decrease or stop harmful releases to the environment.

Strengthening sustainable development

Under the *Federal Sustainable Development Act* (FSDA), ECCC is responsible for leading the development of a federal strategy for sustainable development every three years. Following widespread consultations on a draft Strategy, the 2019–2022 Federal Sustainable Development Strategy[xx] will set out federal government sustainable development priorities, goals and targets, and actions to achieve them.

In 2017, the Minister introduced Bill C-57, an Act to Amend the *Federal Sustainable Development Act* which received Royal Assent on February 28, 2019. The amended Act will focus on advancing sustainable development, improving quality of life for Canadians, and making federal decisions more transparent. More than 90 federal departments and agencies (up from 26) will be required to report on their sustainable development activities, and will promote engagement of Indigenous peoples, businesses, communities and the public in sustainable development.

Protecting coastlines and oceans

ECCC will continue to play a key role in the $1.5 billion whole-of-government Oceans Protection Plan[xxi] to protect Canada's coasts and marine environments, including by contributing science advice to support a state-of-the-art safety system to preserve and restore marine ecosystems. For example, the Department's data and modelling contributions will support environmental sensitivity assessments to help protect marine birds on British Columbia's north coast.

Oil Sands Monitoring

The commitment to ensure the oil sands are developed and monitored in an environmentally and socially responsible manner remains a priority for ECCC. In December 2017, the governments of Canada and Alberta signed a Memorandum of Understanding to renew their commitment to monitoring the environmental impacts of oil sands development through the Oil Sands Monitoring (OSM) program.

The Memorandum of Understanding promotes a collective approach, inclusive of Indigenous communities, industry, and governments, for the implementation, management, and oversight of the OSM program. The implementation of this collective approach is guided by the OSM Program Operational Framework Agreement, which was co-developed with participating Indigenous communities together with the governments of Canada and Alberta. Industry funds the OSM program through Alberta's *Environmental Protection and Enhancement Act*. These funds support monitoring to improve characterization of the state of the environment and enhance understanding of the cumulative effects of oil sands development activities in the oil sands area.

ECCC actively supports the collective approach to program implementation through participation in OSM program governance. Further, the Department is an engaged contributor, providing scientific expertise and leadership to monitoring that considers the impacts of oil sands development on air, water, land and biodiversity. ECCC monitoring and laboratory infrastructure enables this participation.

Experimentation—Applying Behavioural Insights within the Regulatory Lifecycle

ECCC will continue to build capacity to explore and experiment with applying behavioural insights to the design and implementation of regulations and non-regulatory instruments in order to improve outcomes in areas such as stakeholder engagement and compliance. ECCC will continue to identify opportunities where behaviourally informed interventions may help to improve outcomes of activities and communications.

Planned results

Departmental Results: Canadians have clean air					
Departmental result indicators	**Targets**	**Date to achieve target**	**2015–16 Actual results**	**2016–17 Actual results**	**2017–18 Actual results**
Percentage of Canadians living in areas where air quality standards are achieved	85%	2030	70%	Results not available[5]	

Departmental Results: Canadians have clean water					
Departmental result indicators	**Targets**	**Date to achieve target**	**2015–16 Actual results**	**2016–17 Actual results**	**2017–18 Actual results**
Percentage of wastewater systems where effluent quality standards are achieved	100%	2040	77%	77%	76%

Departmental Results: The Canadian environment is protected from harmful substances					
Departmental result indicators	**Targets**	**Date to achieve target**	**2015–16 Actual results**	**2016–17 Actual results**	**2017–18 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 is a new indicator. Results are not available for these years.		

Budgetary Financial Resources (dollars)

2019–20 Main Estimates	2019–20 Planned spending	2020–21 Planned spending	2021–22 Planned spending
345,273,615	345,273,615	307,056,519	281,762,261

Human Resources (Full-Time Equivalents—FTEs)

2019–20 Planned	2020–21 Planned	2021–22 Planned
2,060	1,982	1,802

[5] Air quality monitoring results are subject to data validation and are available after 18–24 months from data collection. Results for 2016 –17 and 2017 (18 are expected in mid-2019 and mid-2020, respectively.

Core Responsibility: 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.

Planning highlights

Conserving 17% of Canada's lands by 2020

Through the Nature Legacy ($1.35 billion in new federal funding in Budget 2018 from 2018–19 to 2022–23), ECCC will continue to pursue innovative partnerships with non-governmental organizations, Indigenous communities, provinces and territories and other partners to achieve Canada's commitment to conserve at least 17% of the country's lands and inland waters, and 10% of coastal and marine areas by the end of 2020. As of December 2018, 10.55% of land and inland waters, and 7.9% of coastal and marine areas is now protected. With partnership initiatives planned and under way, ECCC continues its steady progress toward the 17% target by:

- expanding existing federal protected areas (Migratory Bird Sanctuaries and National Wildlife Areas), which prioritize the protection of habitat for species at risk and migratory birds;
- collaborating with federal, provincial, and territorial ministers responsible for parks, protected areas, conservation, wildlife, and biodiversity, as per commitments outlined in Canada's Natural Legacy Declaration, to meet Canada's conservation targets while working in the spirit and practice of reconciliation with Indigenous peoples;
- awarding funds under the $500 million Canada Nature Fund[xxii] to conserve both spaces and species. Beginning in 2019, eligible recipients will be supported to establish both Territorial and Municipal Protected and Conserved Areas, as well as Indigenous Protected and Conserved Areas. The Edéhzhíe Protected Area[xxiii] (Northwest Territories), designated in October 2018, is the first Indigenous Protected Area in Canada funded by the Canada Nature Fund, and exemplifies reconciliation in action with Indigenous peoples; and
- modernizing the *Wildlife Area Regulations*, that targets 14 new national wildlife areas.

Investing to support gender parity

ECCC will increase opportunities and reduce barriers to participation in conservation initiatives for different gender, socio-economic and ethnic groups. The Department will also undertake a gender-based analysis of the potential impact that proposed prohibitions of uses in protected areas might have on diverse groups of Canadians. ECCC will continue to seek equal representation of women and men in the governance of key initiatives, including the new Canada Nature Fund.

New approach to conserving species at risk

In collaboration with federal, provincial and territorial ministers, ECCC will start to implement a new Pan-Canadian Approach[xxiv] to conserving and protecting species, including those listed under the *Species at Risk Act*, which is aimed at transforming conservation by adopting multi-species and place-based ecosystem-focused approaches. The approach reflects a new framework to guide how Canada protects and recovers species, including a focus on priority places, species, and sectors to achieve multispecies benefits. It also reflects that provinces and territories are the lead for lands under their jurisdiction, and that ECCC will support and partner with them to recover species at risk, as well as other priority species such as migratory birds on those lands.

With the commitment of the $1.35 billion Nature Legacy for the protection of species at risk and protected areas, in 2019 ECCC will work with provinces and territories, Indigenous peoples, and stakeholders on multi-species approaches in priority areas. The new approach features:

- collaboration with partners (provinces and territories and Indigenous peoples) to address the at-risk populations of Canada's Boreal and Southern Mountain Caribou herds, and establishing plans for the recovery and protection of these important species including through SARA Section 11 Conservation Agreements. Local communities, industry and other stakeholders will also work together to protect critical habitats that support the caribou. ECCC will continue to contribute evidence-based science to inform recovery plans and lead the National Boreal Caribou Knowledge Consortium and report on steps taken to protect critical habitat for Boreal Caribou every 180 days until critical habitat is protected, as was done in April and December 2018;
- implementation of multi-species and ecosystem-based approaches for the protection and recovery of species at risk in 11 priority places across Canada under the *Pan-Canadian Approach*. Building upon the success of experimentation initiatives, activities across the priority places will include engagement with partners and stakeholders, data and information sharing, and the development, implementation and ongoing monitoring and reporting of integrated conservation action plans funded by the Canada Nature Fund;
- collaborative priority sectors initiatives, which will be established to enhance beneficial sector practices and improve sector sustainability at local and regional levels for agriculture, forestry, and urban development;
- continuing to advance recovery planning in partnership with federal, provincial and territorial colleagues and;
- collection of data to inform evidence-based decision-making on the design and integrity of protected areas and networks, and on the conservation of species at risk, including data on the impacts of climate change and other stressors on wildlife and ecosystems.

The Department will continue to deliver its obligations under the *Species at Risk Act* (SARA) and to enforce regulations under SARA. These activities are in line with recommendations of the 2018 Horizontal Evaluation of the Species at Risk Program.[xxv]

Partnering with Indigenous peoples

The Indigenous Guardians Pilot Program[xxvi] will support Indigenous peoples in managing their traditional land, water and ice, and in protecting and conserving biodiversity. With funding of $25 million over four years (2018 to 2022), the Government of Canada recognizes the impact and invaluable contributions of Indigenous communities to nature conservation and offers an opportunity to advance true reconciliation. The Pilot Program is being implemented jointly with First Nations, Inuit, and Métis using individualized approaches that respect and recognize each group's unique perspectives, rights, responsibilities and needs. In 2018, 28 First Nations, Inuit and Métis guardians programs were supported by the Indigenous Guardians Pilot Program.

Modernizing migratory bird conservation and protection

ECCC will complete draft regulations to modernize migratory bird regulations in preparation for public consultation by the spring of 2019, and will implement a new electronic permitting system for migratory game bird hunting in time for the 2019 hunting season. To support sustainable migratory bird populations, the Department will monitor priority populations to inform harvest regulation and support evidence-based decision-making for jurisdictions across Canada. This will be supported by efforts to respond to the 2018 Evaluation of the Migratory Birds Program,[xxvii] which recommended that ECCC address gaps in migratory bird monitoring data. ECCC will collaborate with other countries (e.g., Red Knots in Brazil, Canada Warblers in Colombia) to address threats to the 450 migratory birds that call Canada home for part of each year.

Improving impact assessments

The Government of Canada has announced a new impact assessment system, supported by the proposed *Impact Assessment Act* and a new cumulative effects approach. Under the proposed *Impact Assessment Act*, ECCC will continue to provide expertise and advice related to climate change, air quality, water quality, environmental preparedness and emergencies, and biodiversity. This will include developing guidance for project proponents on standard methodologies to address common issues such as species at risk, migratory birds and wetlands issues; contributing advice on strengthening a federal offsets framework that encompasses biodiversity; and developing datasets and science products to inform decisions on the assessment of impacts. The Department will play a lead role in the Government of Canada's new approach to cumulative effects, which includes four elements:

- Open Science and Data Platform to provide publicly accessible environmental science, knowledge, and tools to enable users to help understand the potential impacts of a project.
- Regional assessments to help guide planning and management of cumulative effects, identify potential impacts on the rights and interests of Indigenous peoples, and inform project assessments.
- Strategic assessments to provide guidance on how a policy, plan, program or issue should be considered in the impact assessment process, including an initial strategic assessment on climate change impacts.
- National environmental frameworks to integrate science and provide guidance regarding acceptable levels of impacts.

The Department will lead the first strategic assessment. The Strategic Assessment of Climate Change (SACC) will provide process certainty and transparency, and ensure that a project's greenhouse gas emissions and its resilience to climate impacts are considered and integrated as appropriate, in an impact assessment. Given clear expectations, proponents will be able to inform their project design and better prepare for impact assessments, which may in turn result in a more timely and predictable assessment and approval process.

Compliance with wildlife laws

The Department's on-the-ground enforcement officers verify compliance with wildlife legislation and associated regulations that protect migratory birds, species at risk, wildlife in trade and ECCC's 147 protected areas. Activities focus on areas and species of concern that are vulnerable to illegal activities. ECCC, in collaboration with its partners, uses a combination of science and intelligence gathering to develop enforcement strategies for these areas and species. ECCC will train and deploy new officers hired under Budget 2018 funding.

In addition, ECCC continues to concentrate on capacity building by training ECCC enforcement officers on a range of topics, including Treaty rights and the unique legal status of Indigenous peoples in Canada, in order to support their mandate on First Nations' lands.

Experimentation—Multi-species planning tools for improved Species at Risk and Migratory Birds conservation outcomes

ECCC will be conducting several experiments designed to protect and conserve nature. One example is an experiment that will test the potential to optimize conservation for multiple species at risk and migratory birds derived from single-species focused investments. Through partnerships and staff, ECCC has invested significant effort in developing model-based approaches to predict the abundance and distribution of boreal birds (including species at risk (SAR), and the persistence of species in areas with industrial activity and climate change and in priority areas. ECCC is also investing in similar science for caribou. This experiment will develop an approach for regional and national scale projections to estimate the potential for additional conservation gains for other species to accrue through protection of caribou ranges, resilience under climate change, and priority areas so that single and multi-species outcomes can be assessed. Direction will be facilitated by a novel governance structure involving experts in migratory birds, caribou and SAR policy. Results will provide tools for governments, industry, Indigenous peoples or others seeking to optimize conservation efforts across species, guide departmental priorities, and, facilitate incorporation of multi-species objectives into conservation agreements.

Planned results

Departmental Results: Canada's wildlife and habitat are conserved and protected					
Departmental result indicators	**Targets**	**Date to achieve target**	**2015–16 Actual results**	**2016–17 Actual results**	**2017–18 Actual results**
Percentage of migratory bird species that are within target population ranges	60%	2020	Results are not available for these years.		
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	10.6%	10.5%	10.5%
Departmental Results: Canada's species at risk are recovered					
Departmental result indicators	**Targets**	**Date to achieve target**	**2015–16 Actual results**	**2016–17 Actual results**	**2017–18 Actual results**
Percentage of species at risk for which changes in populations are consistent with recovery objectives	60%	May 2025	43%	43%	43%
Departmental Results: Indigenous peoples are engaged in conservation					
Departmental result indicators	**Targets**	**Date to achieve target**	**2015–16 Actual results**	**2016–17 Actual results**	**2017–18 Actual results**
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.	To be identified once baseline is established in 2018–19.	Not available This is a new indicator. Results are not available for these years.		

budgetary Financial Resources (dollars)

2019–20 Main Estimates	2019–20 Planned spending	2020–21 Planned spending	2021–22 Planned spending
298,536,798	298,536,798	313,021,053	315,925,230

Human Resources (Full-Time Equivalents—FTEs)

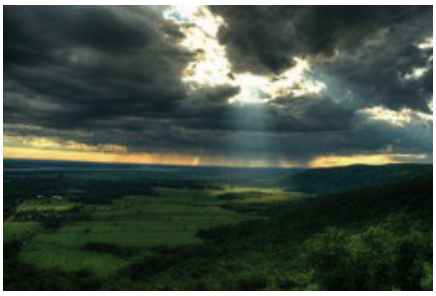
2019–20 Planned	2020–21 Planned	2021–22 Planned
1,117	1,119	1,104

Core Responsibility: 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.

Planning highlights



Canadians are experiencing the impacts of climate change, including increases in the frequency of weather and water-related extreme events such as storms, floods, and droughts. These events are having an impact on public health and safety, economic prosperity, environmental sustainability and social well-being in Canada and around the world. A diverse range of public and private sector organizations rely on the leading edge science, monitoring, modelling, data dissemination, and advice provided by ECCC.

Putting new technology to work to keep Canadians safe

ECCC will continue to leverage new technology, including its state-of-the-art supercomputer—to deliver more timely and accurate weather forecasts. Increasingly accurate weather, water and climate data will help build resilience to the impacts of climate change among Canadians, provincial and territorial Emergency Management organizations, and weather-reliant economic sectors, such as agriculture and transportation. In addition, a leading-edge approach to data management, analysis and innovative information dissemination techniques will allow Canadians to extract the best value from its meteorological and hydrological services.

Canadians rely on accurate and timely information to make health, safety and business decisions when extreme weather events occur. The Department will leverage its investments, innovation and expertise to deliver faster and more accurate forecasts of extreme weather conditions and water-related events, such as storms that can give rise to floods. ECCC's capability to forecast weather has been greatly enhanced by the supercomputer, which provides high-powered computing capacity to run complex models and integrate high volumes of data. This increased capacity allows ECCC to generate complex models and large-scale simulations, resulting in more accurate forecasts for Canadians.

ECCC Policy on Scientific Integrity

The purpose of ECCC Policy on Scientific Integrity is to uphold integrity in designing, conducting, managing, reviewing, communicating or using research and science. The policy was adopted and published internally on December 28, 2018, and on the ECCC website[xxviii] on January 9, 2019. It will take effect on April 1, 2019 aligned with progress in development of the implementation plan, which will be in place in 2019–20.

A complex array of facilities, infrastructure and information technology systems is essential to the Department's ability to monitor and forecast adverse weather for Canadians. ECCC continues to work with its partners to maintain key information technology systems and facilities through continued investment, leveraging technological advancements, and coordination and integration with partners' monitoring systems.

Upgrading vital infrastructure: radars and weather stations

As part of a major initiative to transform its business to meet evolving needs for weather and climate information, ECCC will continue with planned upgrades to weather radars and weather stations. The department is planning to have 12 radar replacements completed by 2019-20, part of a multi-year initiative that will see a minimum of 23 radars replaced by 2023. The new radars will contribute to more reliable weather information for businesses, communities and individuals. To strengthen its capacity further, the Department will also install five new, and upgrade 15 existing weather stations.

Collaboration to continue to meet user needs for weather information

Modelling and prediction systems and technology will be leveraged to support the Government's forward-looking strategy for improving access to data and information, complementing the Government's planned Digital Strategy. The Department will also demonstrate leadership in establishing collaborative monitoring agreements with various partners across Canada, including provinces and territories, as well as a national forum to formalize and strengthen coordination of weather, water and climate monitoring in Canada. Together these initiatives will facilitate greater data exchange, a strategic approach to planning weather and climate monitoring infrastructure, foresight on environmental changes for Canadians, and improvements to the overall quantity, quality, interoperability and accessibility of weather, water and climate monitoring data in Canada.

Considering the needs of populations vulnerable to weather and environmental conditions

Weather warnings and forecasts, and information on environmental conditions can have potentially significant social implications as gender age, race, disability, and family status play a role how people are impacted in, often with the poorest being the most vulnerable. According to the World Meteorological Organization, gender sensitivities are particularly evident in disaster risk reduction, public health, water resources management, and agriculture and food security. ECCC will continue to integrate advice and information on the impacts of extreme weather and environmental conditions to help all Canadians, including addressing the unique needs of the most vulnerable groups and equipping emergency management and other agencies that support vulnerable groups.

On the international front, ECCC will support the World Meteorological Organization to advance international collaboration on weather, water and climate-related issues. ECCC will work collaboratively through formal and informal bilateral and multilateral agreements with the meteorological services of other countries, including the U.S., China, France and the UK, to access timely and accurate global data. ECCC will work with international counterparts to advance applied science and generate new practical applications that can help to enhance the delivery of weather, water and climate services nationally. Maintaining ties with the international community builds knowledge and capacity, allowing further collaboration between ECCC's scientists and their counterparts from around the world. This international collaboration allows Canada to play a role in key initiatives that are aligned with domestic priorities and contribute to the advancement of the United Nations (UN) Sustainable Development Goals (SDGs).

WeatherCAN Application

Canadians will continue to have access to the WeatherCAN[xxix] application and use ECCC's forecasts to plan ahead. The application provides current conditions, hourly and 7 day forecasts for over 10,000 locations in Canada and push notifications for weather alerts issued by the Department for locations anywhere in Canada. It also provide quick access to ECCC's dynamic radar image.

Water works—monitoring and providing data and advice across Canada

Climate change has contributed to observable changes in water availability in Canada, as droughts and floods affect many communities across the country. ECCC will continue to deliver hydrological services and data to users across Canada, including local governments, water management boards, municipalities and businesses in order to support decisions to protect the health and safety of Canadians in such sectors as agriculture, recreation, commerce, infrastructure, and transportation.

As a priority, ECCC will accelerate the deployment of investments received in Budget 2018 to repair water monitoring infrastructure, ensure workforce sustainability, and examine the use of new innovations for water prediction, monitoring and data. ECCC will work closely with provinces and territories, and other stakeholders and partners, to provide hydrometric information and water resources to support provincial and territorial water management agreements, as well as the International Joint Commission for the management of transboundary waters.

Supporting weather-related decisions of other federal departments and agencies

The Department will continue to serve other federal departments, agencies and organizations working in the public interest, including the Department of National Defence, Canadian Coast Guard and NAV CANADA, which rely on ECCC science, monitoring, data and advice on weather, water, ice and environmental conditions for daily operations and business decisions.

Experimentation—Upper Air Renewal II

ECCC looks for innovative and sustainable ways to improve the weather warnings and forecasts that Canadians rely on for a range of health, safety and economic decisions. In 2019-20, the Department will continue to investigate and test new technologies for gathering weather data, such as temperature, humidity, pressure and winds, high in the atmosphere. Should the technologies prove successful, the additional data will eventually complement the Department's existing upper air (radiosonde) network and will be integrated into ongoing weather operations. Based on preliminary findings, the additional data are anticipated to improve the quality and verification of weather forecasts and warnings.

Planned results

Departmental Results: Canadians use authoritative weather and related information to make decisions about their health and safety					
Departmental result indicators	**Targets**	**Date to achieve target**	**2015–16 Actual results**	**2016–17 Actual results**	**2017–18 Actual results**
Index of the timeliness and accuracy of severe weather warnings on a scale of 0 to 10	7.9	2019	8.3 (three year rolling average 2013–15)	8.2 (three year rolling average 2014–16)	8.1 (three year rolling average 2015-17)
Percentage of Canadians that use ECCC information to address water-related impacts on health, safety, economy and environment	80%	2018-19	Not available This is a new indicator. Results are not available for these years.		

Budgetary Financial Resources (dollars)

2019–20 Main Estimates	2019–20 Planned spending	2020–21 Planned spending	2021–22 Planned spending
247,030,038	247,030,038	243,528,680	245,759,536

Human Resources (Full-Time Equivalents—FTEs)

2019–20 Planned	2020–21 Planned	2021–22 Planned
1,544	1,531	1,505

Financial, human resources and performance information for Environment and Climate Change Canada's Program Inventory is available in the GC InfoBase.[xxx]

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: Management and Oversight Services; Communications Services; Legal Services; Human Resources Management Services; Financial Management Services; Information Management Services; Information Technology Services; Real Property Services; Materiel Services; and Acquisition Services.

Planning highlights

ECCC Internal Services enable the Department to deliver on its priorities and to address complex environmental challenges.

ECCC continues to expand and implement its Digital Strategy by increasing digital services to Canadian citizens and businesses including the development of enhanced infrastructure support to Output-based Carbon Pricing, the Low Carbon Economy Fund and the Canada Nature Fund, electronic permitting for migratory game bird hunters, and the implementation of improved systems for grants and contributions in support of a wide range of environmental innovations and services. The Department will continue to work with Shared Services Canada to manage and safeguard the information and data collected through these tools, ensuring the secure delivery of programs and services to all Canadians.

New technologies will also be implemented within the ECCC workplace, enhancing collaboration with key partners and stakeholders (Indigenous groups, other areas of government, private businesses, international partners, and Canadian citizens) and providing flexibility for employees to work smarter and more efficiently whether in the field, from a remote office, or on the road.

In keeping with the Government of Canada's goals of reducing emissions and growing a clean economy, ECCC remains committed to reducing the emissions from its operations, buildings and other assets, further greening all procurement activities, minimizing waste and increasing recycling. In 2019-20, the Department will eliminate unnecessary use of single-use plastics, increase recycling, and establish baselines for facilities that produce the most waste, in order to set targets and track progress in reducing waste from these facilities. ECCC will expand its use of vehicle telematics, which enable the Department to collect and transmit information about vehicle performance, conditions and other data to support fleet management.

The Department will continue to foster a leadership culture that promotes and builds a healthy, respectful and supportive work environment that is free from harassment and discrimination and that promotes an inclusive workforce. In 2019 –20, ECCC will continue to implement its action plan to promote equity, diversity and inclusion to ensure the department works towards addressing areas of under-representation in its workforce.

Ensuring health and safety of all employees

Procuring safety equipment for women in the area of enforcement and policing has proven challenging. Providing properly fitting protective gear and equipment will be a priority investment in 2019 –20 to ensure all staff in these occupations can effectively and safely execute their duties.

ECCC will continue to support employees affected by the government-wide pay transformation initiative.

To respond quickly to new priorities and expectations, ECCC will continue to develop a skilled workforce, particularly in the area of highly specialized personnel. ECCC will maintain the health and capacity of its workforce through initiatives to attract and retain a diverse and inclusive workforce, equip staff with modern tools and processes, plan for succession, and promote employee mental health and workplace well-being. The Department will also continue to support a culture of experimentation and innovation to find effective solutions to environmental issues.

Budgetary Financial Resources (dollars)

2019–20 Main Estimates	2019–20 Planned spending	2020–21 Planned spending	2021–22 Planned spending
206,173,082	206,173,082	202,419,981	200,389,528

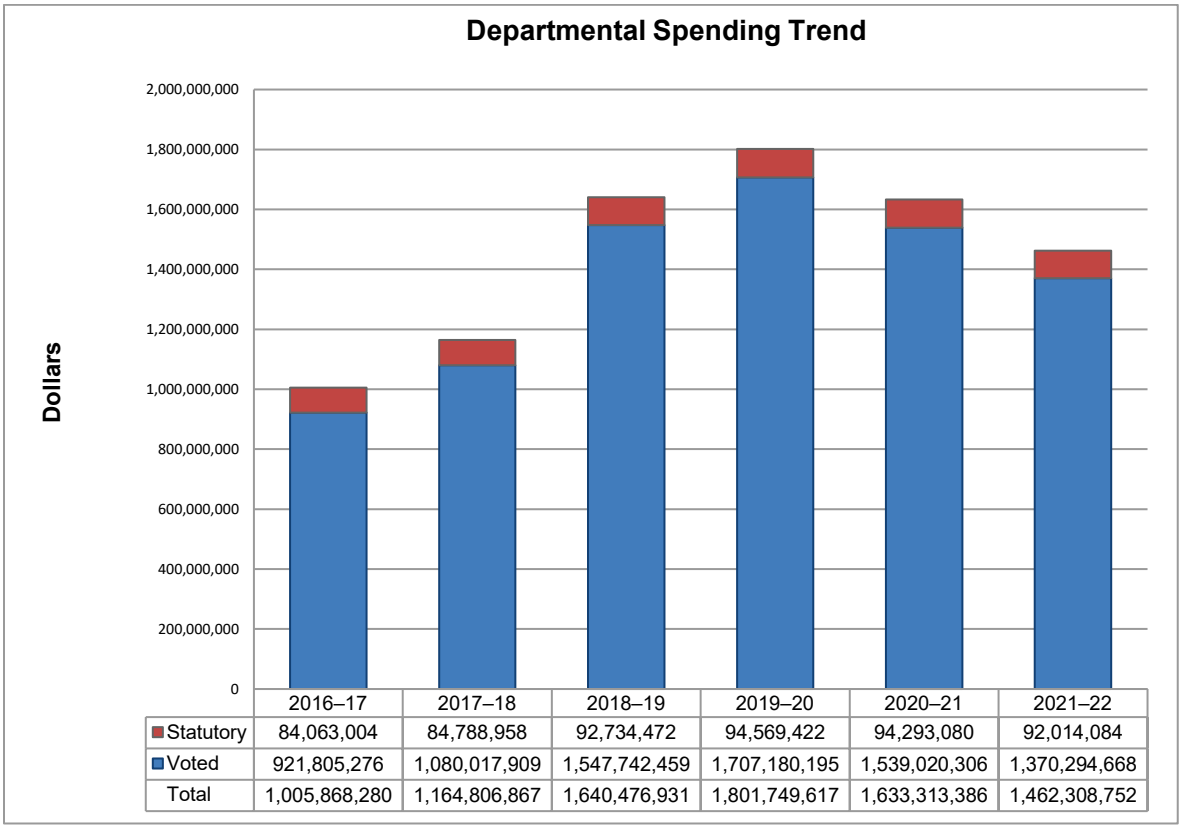
Human Resources (Full-Time Equivalents—FTEs)

2019–20 Planned	2020–21 Planned	2021–22 Planned
1,488	1,467	1,433

Spending and human resources

This section of Environment and Climate Change Canada's 2019–20 Departmental Plan describes the spending and human resources by programs through which the Department delivers its mandate.

Planned spending



	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22
Statutory	84,063,004	84,788,958	92,734,472	94,569,422	94,293,080	92,014,084
Voted	921,805,276	1,080,017,909	1,547,742,459	1,707,180,195	1,539,020,306	1,370,294,668
Total	1,005,868,280	1,164,806,867	1,640,476,931	1,801,749,617	1,633,313,386	1,462,308,752

Note: Environment and Climate Change Canada will seek ongoing funding for priority initiatives. Funding requests for such initiatives are subject to government decisions and will be reflected in future Budget exercises and Estimates documents.

For fiscal years 2016–17 and 2017–18, the amounts shown represent the actual expenditures as reported in the Public Accounts.

For fiscal year 2018–19, the forecast spending represents the planned budgetary and statutory expenditures as presented in the Estimates documents (Main Estimates and Supplementary Estimates), the Operating and Capital carry forward, the approved reprofiles of funds to future years, the compensation allocations from Treasury Board Secretariat for adjustments made to terms and conditions of service employment of the federal public administration for collective agreements, and other adjustments from central agencies.

For the period of 2019–20 to 2021–22, the planned spending reflects approved funding by Treasury Board to support departmental priorities.

Environment and Climate Change Canada's actual spending for 2017–18 was $1,164.8 million, a year-over-year increase of $158.9 million (15.8%) from the 2016–17 actual spending. This increase is mainly due to the increase of salary payments to employees following the ratification and signing of some collective agreements in 2017–18 and temporary initiatives such as: the Green Municipal Fund, activities related to Clean Growth and Climate Change, the Revitalization of Canada's Weather Radar Network, the Low Carbon Economy Fund, the Great Lakes and Lake Winnipeg Basin program and the Contaminated Sediment Remediation Projects.

The increase of $475.7 million from 2017–18 actual expenditures of $1,164.8 million to 2018–19 forecast spending of $1,640.5 million (40.8%) is mainly due to new funding announced in the Budgets 2017 and 2018 to address priorities in support of the:

- Low Carbon Economy Fund;
- Protecting Canada's Nature, Parks and Wild spaces;
- Initiatives supporting Clean Growth and Climate Change;
- Federal Contaminated Sites Action Plan;
- Great Lakes and Lake Winnipeg basin program; and
- Revitalization of Canada's Weather Services.

For explanation of the variance between 2018–19 and 2020–21 planned spending, please see the Budgetary planning summary section.

Budgetary planning summary for Core Responsibilities and Internal Services (dollars)

Core Responsibilities and Internal Services	2016–17 Expenditures	2017–18 Expenditures	2018–19 Forecast Spending	2019–20 Main Estimates*	2019–20 Planned Spending	2020–21 Planned Spending	2021–22 Planned Spending
Taking action on Clean Growth and Climate Change	126,084,560	166,288,973	590,685,633	704,736,084	704,736,084	567,287,153	418,472,197
Preventing and Managing Pollution	286,323,031	351,755,596	350,773,089	345,273,615	345,273,615	307,056,519	281,762,261
Conserving Nature	193,481,114	196,910,240	246,259,396	298,536,798	298,536,798	313,021,053	315,925,230
Predicting Weather and Environmental Conditions	207,249,810	222,002,775	237,608,640	247,030,038	247,030,038	243,528,680	245,759,536
Subtotal	813,138,515	936,957,585	1,425,326,758	1,595,576,535	1,595,576,535	1,430,893,405	1,261,919,224
Internal Services	192,729,765	227,849,281	215,150,173	206,173,082	206,173,082	202,419,981	200,389,528
Total	1,005,868,280	1,164,806,866	1,640,476,931	1,801,749,617	1,801,749,617	1,633,313,386	1,462,308,752

*2019-20 Main Estimates exclusive of Budget 2019-items.

Budgetary planning summary

Excluding funding announced in Budget 2019, approximately $1,801.7 million in total funding is anticipated for 2019–20. The increase of $161.3 million from 2018–19 forecast spending to 2019–20 planned spending is mainly due to new funding announced in the Budgets 2017 and 2018 to address priorities in support of the Low Carbon Economy Fund, the Protecting Canada's Nature, Parks and Wild Spaces, the Federal Contaminated Sites Action Plan, Impact Assessment and Regulatory Regime Implementation and initiatives related to Clean Growth and Climate Change. This increase is partially offset by reductions in planned spending for the Youth Employment Strategy.

Overall, there is a decrease in planned spending over the 2019–20 to 2021–22 planning horizon presented in the summary table. This is the result of sunsetting initiatives with temporary funding. Funding requests for such initiatives are subject to government decisions and will be reflected in future Budget exercises and Estimates documents.

Major initiatives whose funding profile will decrease in 2020–21 include the:

- Low Carbon Economy Fund, under the Taking Action Clean Growth and Climate Change Core Responsibility; and
- Federal Contaminated Sites Action Plan, under the Preventing and Managing Pollution Core Responsibility.

Major initiatives whose funding profile will decrease in 2021–22 include:

- the Low Carbon Economy Fund, under the Taking Action Clean Growth and Climate Change Core Responsibility;
- the Chemicals Management Plan, under the Preventing and Managing Pollution Core Responsibility; and
- Initiatives related to Clean Growth and Climate Change under the Taking Action on Clean Growth and climate Change Core Responsibility.

2019–20 Budgetary planned gross spending summary (dollars)

Core Responsibilities and Internal Services	2019–20 Planned Gross Spending	2019–20 Planned Spending in Specified Purpose Accounts	2019–20 Planned Revenues Netted Against Expenditure	2019–20 Planned Net Spending
Taking action on Clean Growth and Climate Change	704,736,084	0	0	704,736,084
Preventing and Managing Pollution	367,108,057	0	- 21,834,442	345,273,615
Conserving Nature	301,805,972	0	- 3,269,174	298,536,798
Predicting Weather and Environmental Conditions	300,215,626	0	- 53,185,588	247,030,038
Subtotal	1,673,865,739	0	- 78,289,204	1,595,576,535
Internal Services	210,393,085	0	- 4,220,003	206,173,082
Total	1,884,258,824	0	- 82,509,207	1,801,749,617

Environment and Climate Change Canada's major sources of revenues netted against expenditures are the following:

- Provinces who receive water quantity monitoring services;
- the Canadian Association of Petroleum Producers which funds the Joint Canada-Alberta implementation Plan for Oil Sands;
- NAV CANADA to whom Environment and Climate Change Canada provides aviation weather services;
- the Department of National Defence which receives detailed weather services in support of its military operations; and
- the Canadian Coast Guard which receives ice and marine monitoring forecasts and services.

Planned human resources

Human resources planning summary for Core Responsibilities and Internal Services (FTEs)*

Core responsibilities and Internal Services	2016–17 Actual FTEs	2017–18 Actual FTEs	2018–19 Forecast FTEs	2019–20 Planned FTEs	2020–21 Planned FTEs	2021–22 Planned FTEs
Taking action on Clean Growth and Climate Change	688	797	538	539	527	517
Preventing and Managing Pollution	1,697	1,734	2,106	2,060	1,982	1,802
Conserving Nature	929	956	986	1,117	1,119	1,104
Predicting Weather and Environmental Conditions	1,579	1,567	1,555	1,544	1,531	1,505
Subtotal	4,893	5,054	5,185	5,260	5,159	4,928
Internal Services	1,432	1,476	1,450	1,488	1,467	1,433
Total	6,325	6,530	6,635	6,748	6,626	6,361

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

One FTE equals one person working a 37.5-hour work week for the entire year, or any number of part-time employees whose combined hours of work equal one FTE. For fiscal years 2016–17 and 2017–18, the amounts shown represent the actual FTEs as reported in the Departmental Results Report. The total forecast and planned FTE for fiscal years 2018–19, 2019–20, 2020–21 and 2021–22 are calculated using average salary.

ECCC's overall increase of 105 FTEs between the 2017–18 actual and the 2018–19 forecast FTEs is mainly due to new funding announced in the Budgets 2017 and 2018 to address priorities in support of the:

- Protecting Canada's Nature, Parks and Wild spaces;
- Initiatives related to Clean Growth and Climate Change;
- the Great Lakes and Lake Winnipeg basin program; and
- the Low Carbon Economy Fund.

The overall increase of 113 FTEs between the 2018–19 forecast and the 2019–20 planned FTEs is mainly due to the increase in funding profile related to:

- Protecting Canada's Nature, Parks and Wild spaces;
- Impact Assessment and Regulatory Regime Implementation; and
- Initiatives related to Clean Growth and Climate Change.

Overall, there is a decreasing trend in planned FTEs over the 2019–20 to 2021–22 planning horizon. This is the result of sunsetting initiatives with temporary funding. Funding requests for such initiatives are subject to government decisions and will be reflected in future Budget exercises and Estimates documents.

The overall decrease of 122 FTEs between the 2019–20 and 2020–21 planned FTEs is mainly due to the projected reduction in funding profile related to the:

- Federal contaminated Sites Action Plan, under the Preventing and Managing Pollution Core Responsibility;
- Managing Transboundary Water Issues, under the Preventing and Managing Pollution Core Responsibility; and
- Clean Growth and Climate Adaptation, under the Taking Action on Clean Growth and climate Change Core Responsibility.

The overall decrease of 265 FTEs between the 2020–21 and 2021–22 planned FTEs is mainly due to the projected reduction in funding profile related to the:

- Chemical Management Plan, under the Preventing and Managing Pollution Core Responsibility.

Estimates by Vote

For information on Environment and Climate Change Canada's organizational appropriations, consult the 2019–20 Main Estimates.[xxxi]

Future-Oriented Condensed Statement of Operations

The Future-Oriented Condensed Statement of Operations provides a general overview of Environment and Climate Change Canada's operations. The forecast of financial information on expenses and revenues is prepared on an accrual accounting basis to strengthen accountability and to improve transparency and financial management. The forecast and planned spending amounts presented in other sections of the Departmental Plan are prepared on an expenditure basis and, as a result, amounts may differ.

A more detailed Future-Oriented Statement of Operations and associated notes, including a reconciliation of the net cost of operations to the requested authorities, are available on Environment and Climate Change Canada's website.[xxxii]

Future-Oriented Condensed Statement of Operations
For the Year Ended March 31, 2020 (dollars)

Financial Information	2018–19 Forecast results	2019–20 Planned results	Difference (2019–20 Planned results minus 2018–19 Forecast results)
Total expenses	1,793,251,193	1,956,066,422	162,815,229
Total revenues	109,291,898	107,997,941	-1,293,957
Net cost of operations before government funding and transfers	1,683,959,295	1,848,068,481	164,109,186

Total expenses are expected to increase by $162.8 million in 2019–20 in comparison with the forecast results of 2018–19. The overall increase is mainly due to new funding announced in the Budgets 2017 and 2018 to address priorities in support of the Low Carbon Economy Fund, the Protecting Canada's Nature, Parks and Wild Spaces, Impact Assessment and Regulatory Regime Implementation and initiatives related to Clean Growth and Climate Change. This increase is partially offset by reductions in planned spending for the Youth Employment Strategy.

Based on fiscal year 2018–19, total revenues for 2019–20 are expected to be fairly similar as services provided will remain the same.

For comparative purposes, planned results are based on historical data and trends, and include 2019–20 Main Estimates. 2018–19 forecast results give the reader information on 2018–19 estimated spending based on historical data and trends, the 2018–19 Main Estimates, the Budget Implementation Vote, Supplementary Estimates A and B, carry-forward and funding received from Treasury Board for retroactive compensation of collective agreements.

Additional Information

Corporate Information

Organizational Profile

Appropriate Minister: The Honourable Catherine McKenna, P.C., M.P.

Institutional Head: Dr. Stephen Lucas

Ministerial Portfolio: Environment and Climate Change Canada

Enabling Instruments:

- *Department of the Environment Act*[xxxiii]
- *Canadian Environmental Protection Act, 1999*[xxxiv]
- *Species at Risk Act*[xxxv]
- *International River Improvements Act*[xxxvi]
- *Canada Water Act*[xxxvii]
- The *Lake of the Woods Control Board Act, 1921*[xxxviii]
- *Weather Modification Information Act*[xxxix]
- *Fisheries Act*[xl] (administration of the Pollution Prevention Provisions)
- *Antarctic Environmental Protection Act*[xli]
- *Migratory Birds Convention Act, 1994*[xlii]
- *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act*[xliii]
- *Canada Wildlife Act*[xliv]
- *Federal Sustainable Development Act*[xlv]
- *Canadian Environmental Assessment Act, 2012*[xlvi]
- *Environmental Violations Administrative Monetary Penalties Act*[xlvii]
- *National Wildlife Week Act*[xlviii]

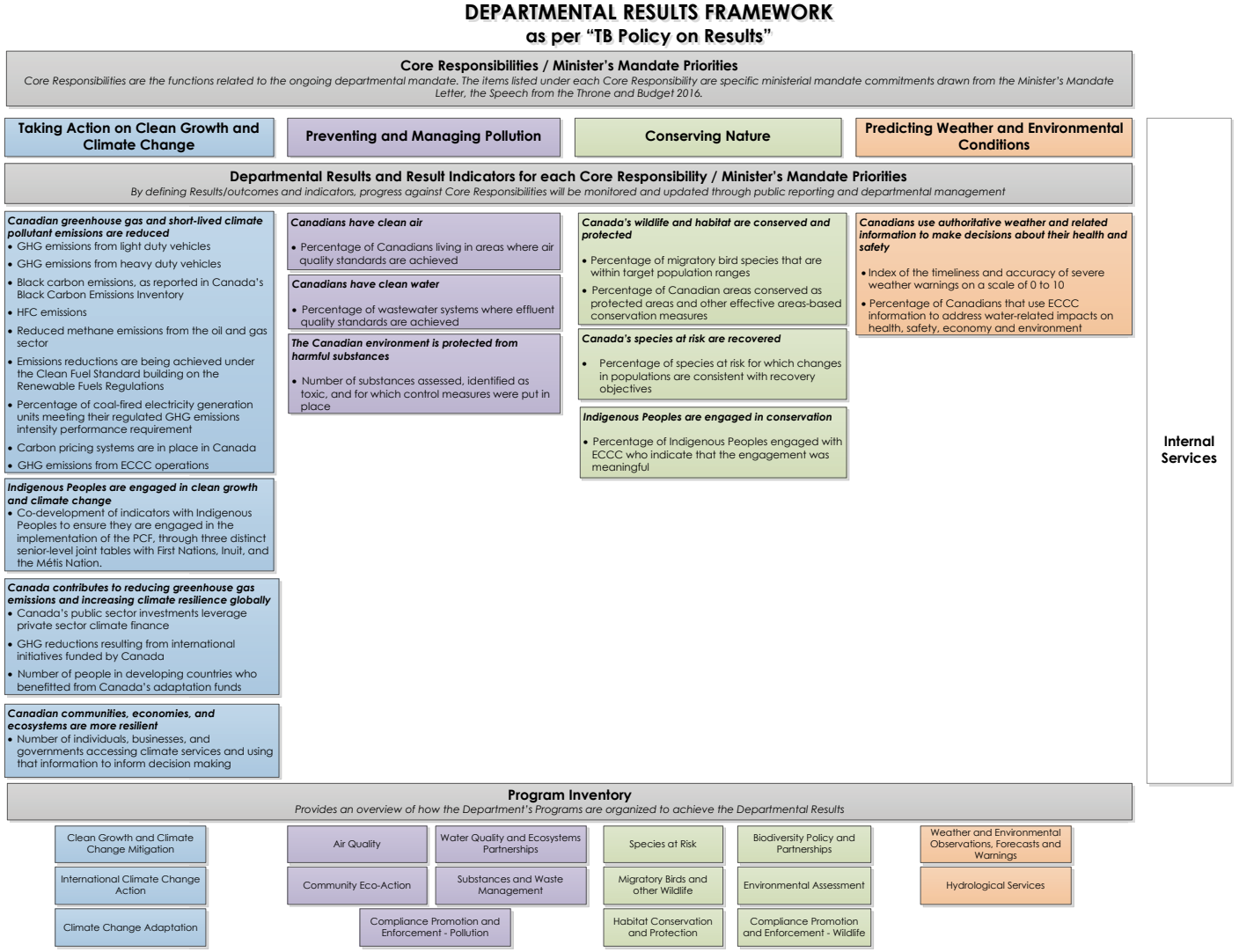
Year of Incorporation / Commencement: 1971

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.[xlix]

Reporting framework

Environment and Climate Change Canada's Departmental Results Framework and Program Inventory of record for 2019–20 is shown below.



Supporting Information on the Program Inventory

Supporting information on planned expenditures, human resources and results related to Environment and Climate Change Canada's Program Inventory is available in the GC InfoBase.[i]

Supplementary Information Tables

The following supplementary information tables are available on Environment and Climate Change Canada's website.[ii]

- Departmental Sustainable Development Strategy
- Details on transfer payment programs of $5 million or more;
- Disclosure of transfer payment programs under $5 million;
- Gender-based analysis plus
- Horizontal Initiatives;
- Status Report on transformational and major Crown projects
- 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 Federal Tax Expenditures.[iii] 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

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)
Any change 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)
The department's Core Responsibilities, Departmental Results and Departmental Result Indicators.

Departmental Results Report (rapport sur les résultats ministériels)
A report on the actual accomplishments against the plans, priorities and expected results set out in the corresponding Departmental Plan.

evaluation (évaluation)
In the Government of Canada, the systematic and neutral collection and analysis of evidence to judge merit, worth or value. Evaluation informs decision-making, improvements, innovation and accountability. Evaluations typically focus on programs, policies and priorities and examine questions related to relevance, effectiveness and efficiency. Depending on user needs, however, evaluations can also examine other units, themes and issues, including alternatives to existing interventions. Evaluations generally employ social science research methods.

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-diverse people. The "plus" acknowledges that GBA goes

beyond sex 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 2019–20 Departmental Plan, government-wide priorities refers to 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 Information Profile (profil de l'information sur le rendement)
The document that identifies the performance information for each Program from the Program Inventory.

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 the 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 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.
Program Inventory (répertoire des programmes)

Identifies all of the department's programs and describes how resources are organized to contribute to the department's Core Responsibilities and Results.

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.

sunset program (programme temporisé)
A time-limited program that does not have an ongoing funding and policy authority. When the program is set to expire, a decision must be made whether to continue the program. In the case of a renewal, the decision specifies the scope, funding level and duration.

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

[i] Experiment : www.canada.ca/en/innovation-hub/services/reports-resources/experimentation-direction-deputy-heads.html
[ii] Gender-Based Analysis Plus: www.swc-cfc.gc.ca/gba-acs/index-en.html
[iii] Ocean Plastics Charter: www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/international-commitments/ocean-plastics-charter.html
[iv] Ocean Protection Plan: www.canada.ca/en/transport-canada/news/2017/10/the_oceans_protectionplan.html
[v] WeatherCAN: www.canada.ca/en/environment-climate-change/services/weather-general-tools-resources/weathercan.html
[vi] Canadian Council of Ministers of the Environment: www.ccme.ca/
[vii] Canadian Centre for Climate Services: www.canada.ca/en/environment-climate-change/services/climate-change/canadian-centre-climate-services/about.html
[viii] Canadian Council of Ministers of the Environment: www.ccme.ca/
[ix] Strategy on Zero Plastic Waste: www.ccme.ca/en/current_priorities/waste/waste/strategy-on-zero-plastic-waste.html
[x] Ocean Plastics Charter: www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/international-commitments/ocean-plastics-charter.html
[xi] Chemicals Management Plan: www.canada.ca/en/health-canada/services/chemical-substances/chemicals-management-plan.html
[xii] Canada-U.S. Air Quality Agreement: www.canada.ca/en/environment-climate-change/services/air-pollution/issues/transboundary/canada-united-states-air-quality-agreement-overview.html
[xiii] Air Quality Management System: www.ccme.ca/en/resources/air/aqms.html
[xiv] Clean up Randle Reef: www.randlereef.ca/
[xv] Great Lakes Protection Initiative: www.canada.ca/en/environment-climate-change/services/great-lakes-protection.html
[xvi] Chemical of Mutual Concern: www.ec.gc.ca/grandslacs-greatlakes/default.asp?lang=En&n=87A18E70-1&pedisable=true
[xvii] Canadian Areas of Concern: www.canada.ca/en/environment-climate-change/services/great-lakes-protection/areas-concern.html
[xviii] St. Lawrence Action Plan 2011–2026: planstlaurent.qc.ca/en/home/about_us/background/historic.html
[xix] Ottawa River Watershed Study: www.placespeak.com/uploads/5492/ENG_ORWS_Draft_Report_2018_09_28__Clean.pdf
[xx] Federal Sustainable Development Strategy: www.canada.ca/en/services/environment/conservation/sustainability/federal-sustainable-development-strategy.html
[xxi] Oceans Protection Plan: letstalktransportation.ca/OPP
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Additional information can be obtained at:

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