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ACHIEVING A

# SUSTAINABLE FUTURE

A FEDERAL SUSTAINABLE DEVELOPMENT STRATEGY FOR CANADA  
2019 TO 2022

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# MESSAGE FROM THE MINISTER

In December 2018, I asked for your help in shaping our 2019–2022 Federal Sustainable Development Strategy, which sets out the Government of Canada’s environmental sustainability goals, targets and actions for the next 3 years.

When I asked for your comments on our last draft strategy in 2016, your response was overwhelming. This time, you outdid yourselves. You talked about your vision for sustainable development in Canada. You provided new ideas for change and improvement. Once again, you presented concrete, constructive suggestions for an effective strategy that will guide our coordinated efforts.

In response, I am proud to present the final 2019–2022 strategy. It sets out a path for the Government of Canada to move toward a clean environment in which all Canadians can live and work.

This strategy updates and renews our sustainable development approach. It will continue to centre on 13 aspirational goals that reflect the Canada we want and supports the environmentally focused goals from the United Nations 2030 Agenda for Sustainable Development. To help us achieve our goals, we have made our targets stronger and linked them to priority actions. We have also updated our short-term milestones and action plans for the next 3 years.

You asked us to match your sense of urgency and level of ambition, and you asked to see more social and economic considerations reflected in the strategy. We listened, and we have added new targets in areas such as increasing agri-food exports, clean technology exports, and zero-emission vehicles sales in Canada.

And there is so much more we will do.

This strategy is tabled under the existing *Federal Sustainable Development Act*. Renewed legislation for sustainable development will guide future federal strategies. *An Act to amend the Federal Sustainable Development Act*, received Royal Assent in February 2019. Once the amendments are in force, they will establish a thoughtful and practical framework for the future. They will give us flexibility to consider a broader picture of sustainable development in the strategy. They will also increase transparency and accountability and provide more opportunities for Canadian voices to help shape the government’s plan.

This is an exciting time for sustainable development in Canada. In addition to *An Act to amend the Federal Sustainable Development Act*, the government, led by Employment and Social Development Canada, is working with partners to implement the 2030 Agenda for Sustainable Development, particularly through the development of a whole-of-society 2030 Agenda National Strategy. As we implement the Federal Sustainable Development Strategy and future federal strategies, our efforts will continue to align with and contribute to this broader national approach.

We will look to you for help once again the next time we renew our strategy, but it is never too late to share your thoughts.

Share your ideas about sustainable development, and tell us what you are doing for a more sustainable Canada. [Send us an email](#), [engage with the online version of the strategy](#), or [join the discussion on Get Involved](#), our interactive engagement website.

I look forward to continuing the conversation and working with you for a more sustainable Canada.



**The Honourable Catherine McKenna**  
*Minister of Environment and Climate Change*  
@ec\_minister

# EXECUTIVE SUMMARY

The Federal Sustainable Development Strategy (FSDS) sets out the Government of Canada's sustainable development priorities, establishes goals and targets, and identifies actions to achieve them. The 2019–2022 FSDS—Canada's fourth—outlines what we will do to promote clean growth, ensure healthy ecosystems, and build safe, secure and sustainable communities over the next 3 years.

Beginning in December 2018, we looked to you for input and advice. We asked you to share your vision for a sustainable Canada, to help us improve our targets, milestones, actions and indicators, and to tell us what you are doing for a greener Canada.

In response, you contributed more than 300 written submissions, more than 200 social media posts and replies, and more than 190 comments that were provided as part of a letter-writing campaign on nuclear energy. More than 1000 of you attended webinars and presentations on the FSDS. We heard from Canadians across the country, including governments, Indigenous organizations, non-governmental organizations, academics, businesses and individuals. You provided ideas, feedback and suggestions that have helped us build on past progress and make our strategy stronger.

Drawing on this input, over the next 3 years we will continue to work toward our vision that Canada is one of the greenest countries in the world and our quality of life continues to improve.

As in the 2016–2019 strategy, our work in 2019–2022 will centre on 13 aspirational, long-term goals that reflect the Canada we want and are a Canadian reflection of the environmental dimensions of the global Sustainable Development Goals:



## EFFECTIVE ACTION ON CLIMATE CHANGE

A low-carbon economy contributes to limiting global average temperature rise to well below 2 degrees Celsius and supports efforts to limit the increase to 1.5 degrees Celsius



## GREENING GOVERNMENT

The Government of Canada will transition to low-carbon, climate-resilient, and green operations



## CLEAN GROWTH

A growing clean technology industry in Canada contributes to clean growth and the transition to a low-carbon economy



## MODERN AND RESILIENT INFRASTRUCTURE

Modern, sustainable, and resilient infrastructure supports clean economic growth and social inclusion



## CLEAN ENERGY

All Canadians have access to affordable, reliable and sustainable energy



## HEALTHY COASTS AND OCEANS

Coasts and oceans support healthy, resilient and productive ecosystems



## PRISTINE LAKES AND RIVERS

Clean and healthy lakes and rivers support economic prosperity and the well-being of Canadians



## SUSTAINABLY MANAGED LANDS AND FORESTS

Lands and forests support biodiversity and provide a variety of ecosystem services for generations to come



## HEALTHY WILDLIFE POPULATIONS

All species have healthy and viable populations



## CLEAN DRINKING WATER

All Canadians have access to safe drinking water and, in particular, the significant challenges Indigenous communities face are addressed



## SUSTAINABLE FOOD

Innovation and ingenuity contribute to a world-leading agricultural sector and food economy for the benefit of all Canadians



## CONNECTING CANADIANS WITH NATURE

Canadians are informed about the value of nature, experience nature first hand, and actively engage in its stewardship



## SAFE AND HEALTHY COMMUNITIES

All Canadians live in clean, sustainable communities that contribute to their health and well-being

Medium-term targets and short-term milestones support each goal. Action plans describe what we will do to achieve our goals and targets.

Meanwhile, cross-cutting priorities such as conducting robust and thorough environmental assessments, respecting the rights of Indigenous peoples, ensuring that environmental effects are fully considered in policy, plan and program development, and implementing strong environmental legislation will support progress in all areas of the FSDS.

We acknowledge that we cannot achieve sustainable development alone—partners such as provinces and territories, Indigenous peoples, communities, businesses, scientists, academia and non-governmental organizations all play a role in helping us meet our objectives.

Finally, we need your help—you can make a difference in areas such as addressing climate change, protecting ecosystems and improving air quality. We hope that you'll take action, and that you'll continue to provide input and ideas to help us further refine our sustainable development vision and long-term goals.



# INTRODUCTION

*The Federal Sustainable Development Act* provides the legal framework for the Federal Sustainable Development Strategy, or FSDS. It requires the Minister of Environment and Climate Change to table a new strategy every 3 years. Regular updating of the strategy allows it to reflect new priorities.

The FSDS sets out the Government of Canada's environmental sustainability priorities, establishes goals and targets, and identifies actions to achieve them. It outlines what we'll do across government to promote clean growth, ensure healthy ecosystems and build safe, secure and sustainable communities over a 3-year period.

In October 2016 we tabled the 2016-2019 FSDS. That strategy:

- ♦ set out goals aligned with the environmentally-focused Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda for Sustainable Development (2030 Agenda)
- ♦ established strong targets and indicators
- ♦ took an inclusive approach recognizing the important roles of other governments, Indigenous peoples, stakeholders and all Canadians

This strategy updates the 2016–2019 FSDS and shows how we'll continue to advance our sustainable development goals and support the environmentally-focused SDGs over the next 3 years.

It sets out 13 aspirational goals that reflect the Canada we want, supported by medium-term targets, short-term milestones, and clear action plans. It also includes cross-cutting priorities that will support progress in all areas of the strategy including:

- ♦ supporting international agreements and initiatives, including the 2030 Agenda
- ♦ supporting informed and sustainable decision making across government
- ♦ implementing strong environmental legislation and ensuring robust and thorough environmental assessments
- ♦ working in partnership with Indigenous peoples and communities
- ♦ maintaining an ongoing conversation with partners, stakeholders and Canadians on sustainable development

Departments and agencies across government contribute to implementing our strategy and achieving results. The Act requires 26 federal organizations to prepare their own strategies that comply with and contribute to the FSDS. An additional 16 organizations contribute on a voluntary basis.

Our strategy supports Canada's international sustainability commitments, including the 2030 Agenda for Sustainable Development. Additionally, it reflects key government initiatives including our support for the [Pan-Canadian Framework on Clean Growth and Climate Change](#) and other actions to transition Canada to a low-carbon economy.

In defining federal environmental sustainability commitments and actions, the 2019–2022 FSDS will complement a National Strategy on the 2030 Agenda led by Employment and Social Development Canada. While the FSDS and the National Strategy are different, they reinforce each other. The FSDS will continue to support Canada's overall response to the 2030 Agenda.

This strategy was prepared under the existing *Federal Sustainable Development Act*. However, amendments to the Act received Royal Assent in February 2019 and will come into force on a future date to be determined by the Governor in Council. Once the amendments are in force, future strategies will be guided by an Act that supports greater accountability, a truly whole-of-government approach, and more effective engagement with Canadians.



# LISTENING TO CANADIANS

On December 3, 2018, we released the draft 2019–2022 FSDS for public comment. It built on the 2016–2019 strategy by setting out 13 aspirational goals that reflect the Canada we want. The draft strategy also added targets to reflect new initiatives such as the Greening Government Strategy, and updated short-term milestones with new priorities.

In releasing the draft, we aimed to continue the conversation about sustainable development that we started during the 2016 consultations. This time, we asked for your views on:

- ♦ what sustainable development means to you
- ♦ your vision for a sustainable Canada
- ♦ which sustainable development issues we should prioritize over the next 3 years
- ♦ how well our goals align with your sustainable development vision
- ♦ how we can continue to address Canada’s sustainable development challenges
- ♦ what you’ll do to make a difference over the next 3 years

To enable as many people as possible to participate in the consultations, we provided a variety of ways to comment, including an interactive e-strategy, the online discussion space [Get Involved](#), a series of public webinars highlighting specific goals and aspects of the strategy, and a social media campaign that called on you to:

- ♦ Share our posts with your followers
- ♦ Help us with your feedback
- ♦ Act for the environment
- ♦ Report back on your actions
- ♦ Evaluate how we are doing, and the results of your own actions

Similar to past consultations, this one showed us that you are passionate and knowledgeable about sustainable development. More than 1000 people engaged in dialogue with us by participating in webinars and presentations. We also received more than 850 total comments, including more than 300 submissions provided through the online version of the strategy, Get Involved, meetings and email, more than 200 social media posts and replies, and more than 190 comments provided as part of a letter-writing campaign on nuclear energy. These comments provided insights, ideas and suggestions that helped us build on past progress and strengthen our strategy. Through all of the communication channels used, we reached more than 250,000 Canadians.

We heard from a broad range of partners and stakeholders, including governments, Indigenous organizations, non-governmental organizations, academics, businesses, and individual Canadians. We also heard from the [Commissioner of the Environment and Sustainable Development](#) and the [Sustainable Development Advisory Council](#).

## WHAT WE HEARD

### What you liked

Your comments on the strategy included recognition that the 2019–2022 FSDS builds on the previous 2016–2019 strategy and continues to show improvements from past FSDS cycles. We heard that you liked the strong focus on engagement and the use of interactive platforms such as Get Involved and the flexible online version of the strategy. We also heard support for actions in priority areas such as climate change and clean energy.

### Your sustainable development priorities

Across the submissions that we received, Canadians identified a number of sustainable development priorities for action. You asked us to consider the balance between economic growth and environmental protection. You spoke about the impacts of regulation and the price on carbon pollution, and you told us that faster and more transparent mechanisms for supporting municipal action and sustainable technology adoption are important across almost every priority area.

You urged deliberate but rapid action on sustainable development issues, recognizing that climate change in particular defines our time. We heard strong support for ambitious action to reduce greenhouse gas emissions and meet Canada’s Paris Agreement target to reduce emissions 30% from 2005 levels by 2030. This included, for example, support for measures such as regulations to reduce methane emissions from the oil and gas sector as well as calls for federal leadership and support for a coordinated national approach to addressing this urgent challenge. At the same time, you urged us to also take action to help Canadian communities adapt to unavoidable climate change impacts. You told us that you want to leave a safe and healthy Canada for your children and for all future Canadians—and you believe that we cannot continue to act in a “business as usual” fashion.

You told us that you want to see even greater action to promote clean and renewable energy in Canada, calling for innovative solutions, green jobs, and a clear transition plan. You emphasized that it is important to achieve an appropriate mix of energy sources. You spoke frankly to us about competing priorities and questioned whether ongoing fossil fuel subsidies and investments in pipeline projects can be reconciled with sustainable development. Many asked us to consider the role of nuclear energy in our clean energy vision, expressing concern over the safety and environmental impacts of nuclear energy and advocated for responsible

waste management practices in line with the “polluter pays” principle. You also told us that Canadians need support and training to fully participate in and benefit from the opportunities presented by the green economy.

You saw zero-emission vehicles as an important part of the solution to reducing greenhouse gas emissions and addressing the challenge of climate change. You called on government to provide incentives for Canadians to purchase zero-emission vehicles as well as more action to build electric vehicle charging stations.

You pointed out that individual Canadians play a significant role, highlighting the need for citizens to adopt sustainable lifestyles and choose sustainable products. Noting that sustainability goes beyond the environment, you also emphasized that government should provide information and resources that help Canadians make healthy food choices. We also heard that you want us to help advance the circular economy, address food waste, and decrease single-use plastics.

We heard about the importance of protecting Canada’s lands and waters. Among other priorities, you called for action to address ocean plastics and to conserve Canada’s endangered grassland ecosystems. We heard about the importance of managing forests sustainably and protecting habitat that wildlife species need to survive and thrive, and we noted your concerns about clear-cut logging and deforestation. You also stressed the importance of sustainable water management practices and told us in clear and certain terms that all Canadians should have access to clean drinking water.

You said that you support reconciliation and the United Nations Declaration on the Rights of Indigenous Peoples. We heard that working closely with Indigenous governments, communities, and values will help to accomplish our goals. You also told us that intergenerational equity guides your vision of a sustainable future.

You also talked to us about the importance of partnerships with provinces, territories, municipalities, industry, researchers, and the private sector. From supporting sustainable urban planning to developing sustainable development policy tools, you asked us to continue investing in these partnerships.

### **Your suggestions for improvement**

While expressing support for measures in the FSDS, you called for even more ambitious goals, targets and actions, especially on climate change. You also spoke to us about ensuring that the principle of intergenerational equity continues to inform our strategy and about getting the balance right between environmental protection and economic development.

We heard support for greater emphasis on social and economic dimensions of sustainable development—as well

as environmental sustainability—and closer alignment with the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda. We also heard that you want to see rapid action to implement *An Act to amend the Federal Sustainable Development Act*, which received Royal Assent in February 2019 but has not yet come into force by order of Governor in Council.

You made suggestions for how to improve transparency and accountability through the FSDS, including through more frequent and more accessible reports on progress toward goals and targets.

Finally, we heard comments on individual FSDS targets, indicators and action plans and how to make them stronger, including the need to ensure targets are specific, measurable and include a baseline, and an indicator is identified to measure progress on each target.

## **WHAT WE DID**

Comments from partners, stakeholders and individual Canadians played an important role in shaping our strategy. The following are some of the steps we took to improve our strategy in response to public comments.

### **Strengthened our targets**

Measurable, time-bound targets allow us to track our progress and report to Canadians on results. Responding to comments from the Commissioner of the Environment and Sustainable Development as well as from stakeholders and Canadians, we have strengthened our targets on greenhouse gas emissions and waste from federal operations, adaptation to climate change in federal operations, health of national parks, sustainable agriculture and air quality, including by ensuring they are specific and supported by indicators.

### **Added a new target on zero-emission vehicles**

For the first time, the 2019–2022 FSDS includes a target on sales of zero-emission vehicles. We aim to increase sales of zero-emission vehicles in Canada to 10% of light-duty vehicle sales by 2025, 30% by 2030, and 100% by 2040. Our strategy also highlights how we are working with partners to develop electric vehicle charging stations across Canada. We have also added a new target on growing Canada’s clean technology exports.

### **Broadened our strategy to better address economic and social sustainability**

We recognize that sustainable development goes beyond the environment alone. While the 2019–2022 FSDS continues to focus primarily on environmental sustainability, we’ve revised targets, milestones and actions that support our Sustainable Food goal to reflect efforts to promote an innovative and competitive agri-food sector and help Canadians make healthy food choices. Other revisions, such as a new target on growing clean technology exports, also highlight economic and social dimensions of sustainable development.

## Provided a more comprehensive suite of indicators to measure progress

Building on past strategies, the 2019–2022 FSDS provides an expanded annex on performance measurement setting out all indicators and performance measures that will be used to track progress on the strategy. We've also broadened our performance measurement approach for the strategy to include additional indicators that provide context for our targets—for example, indicators that provide insight into climate change in Canada as well as land use change over time.

## Clarified linkages between targets, indicators and action plans

The action plans set out in the 2019–2022 FSDS support our environmental sustainability goals, targets and milestones. To enhance transparency and accountability, we have improved our action plans by clearly linking our priority actions to medium-term targets. Our new, expanded performance measurement annex also makes clearer linkages between FSDS targets and the indicators that will be used to report on results.

## Continuing the conversation

It's never too late to share your thoughts on the FSDS and sustainable development. We want to keep the conversation going as we implement our new strategy and plan for the future.

We invite you to provide comments on your sustainability priorities, goals and targets, and tell us how we can continue to improve future strategies.

We also encourage you to join the discussion on [Get Involved](#) and let us know what you're doing to protect the environment and contribute to sustainable development. Connect with us on social media using the hashtag #SustDev and share our posts. We always look forward to hearing from you so drop us an email at [ec.bdd-sdo.ec@canada.ca](mailto:ec.bdd-sdo.ec@canada.ca).

### TALKING WITH THE SUSTAINABLE DEVELOPMENT ADVISORY COUNCIL

The [Sustainable Development Advisory Council](#) was a key part of public consultations on the draft 2019–2022 FSDS. The council's role includes advising the Minister of Environment and Climate Change on draft federal sustainable development strategies, and its members represent each province and territory as well as Indigenous peoples, environmental non-governmental organizations, business and labour.

In written submissions and in a meeting with the Minister of Environment and Climate Change, council members noted that the draft 2019–2022 FSDS was a more comprehensive plan than previous versions and that the scope of its reporting had increased. Several council members complimented the draft FSDS, calling it a strong and accessible document, and noting that the information was well disseminated.

Many council members said that consideration of sustainable development's social and economic pillars is important, especially regarding poverty and health. Some also noted that issues related to circular economy and adaptation to climate change could receive more emphasis, and a few members discussed an energy transition strategy. Other members provided insights about the strategy's relationship to reconciliation with Indigenous peoples, the possibility of more ambitious actions to meet Canada's commitments under the Paris Agreement, and the merits of stronger efforts to decarbonize and electrify Canada's energy sector.

Council members remain concerned about climate change impacts in the north and difficulties in understanding and accessing federal funding for sustainability projects. Others discussed the need for more public education on sustainability issues. While Canada's efforts to green government and procurement demonstrate its leadership in sustainability, the council clarified that all levels of government must be engaged in this process. In particular, they called for making sustainable development tools and training accessible to municipalities and small business owners.

The council also asked us to take a long-term approach to the enduring problems that climate change poses. As one council member advised, "we cannot afford to only follow those solutions that are politically popular."

Overall, the council members saw the FSDS as a mechanism for Canada to demonstrate strategic leadership on sustainable development issues while also considering regional contexts, young Canadians, and diverse perspectives from across the country. Ongoing dialogue with all Canadians will remain essential to this leadership, as will ensuring that Canada's strategy is linked to global movements in sustainable development such as the 2030 Agenda and the SDGs.

# SUSTAINABLE DEVELOPMENT AT HOME AND ABROAD

In September 2015, United Nations Member States adopted the [2030 Agenda for Sustainable Development](#) to eradicate poverty, protect the planet and ensure prosperity by the year 2030. The 2030 Agenda includes 17 SDGs and 169 targets. The SDGs apply to all countries and integrate the 3 dimensions of sustainable development: social, economic, and environmental. The pledge to leave no one behind is central to the 2030 Agenda and the SDGs.

Less than 3 months after the 2030 Agenda was adopted, parties to the [United Nations Framework Convention on Climate Change](#) adopted the [Paris Agreement](#), including the goal to limit global temperature rise this century to well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius.

Now we are working alongside countries around the world to put these commitments into action.

## SUPPORTING THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

Canada is committed to implementing the 2030 Agenda and its SDGs at home and abroad. Many of the government's priorities, policies and programs are helping Canada make progress on these goals, including reducing poverty; growing and strengthening Canada's middle class; reconciliation with Indigenous peoples; advancing gender equality and the empowerment of all women and girls; taking action on climate, clean energy and oceans; and ensuring access to justice for all Canadians.

In July 2018, Canada presented its first [Voluntary National Review](#) to the United Nations High-Level Political Forum, which took stock of our progress to date, noted our challenges, and set the stage for the continued work ahead.

To ensure continued progress and coordination of Canada's efforts, Budget 2018 provided support for implementation of the 2030 Agenda.

Through Budget 2018, we allocated \$49.4 million over 13 years, starting in 2018–2019, to establish an SDG Unit to coordinate Canadian efforts to advance the SDGs both domestically and internationally and fund monitoring and reporting activities by Statistics Canada. Up to \$59.8 million over 13 years, starting in 2018–2019, will also be provided to support horizontal, multi-stakeholder projects that advance the SDGs in Canada.

The Prime Minister appointed the Minister of Children, Families and Social Development to lead Canada's implementation of the 2030 Agenda, and the development of a whole-of-society 2030 Agenda national strategy, in collaboration with provinces and territories, Indigenous peoples, municipalities, civil society, the private sector, and other stakeholders.

Federal ministers, departments and agencies are all responsible for implementing the 2030 Agenda and supporting the development of the National Strategy. Given the alignment of Canadian priorities with the SDGs, work that supports the 2030 Agenda is already underway. However, departments and agencies will continue to examine the extent to which policies and programs contribute to the 2030 Agenda's goals and targets, with a view to identifying gaps and areas where action is needed.

To advance the 2030 Agenda domestically and internationally, a Sustainable Development Goals Unit within Employment and Social Development Canada is serving as a focal point to help coordinate Canada's overall efforts.

Responsibilities include:

- ♦ developing a 2030 Agenda National Strategy through engagement with, among others, all levels of government, Indigenous peoples, civil society, the private sector, academia and youth
- ♦ administering the SDG funding program to support projects aimed at building awareness of the 2030 Agenda, increasing partnerships and networks, advancing research, and furthering Canada's implementation of the 2030 Agenda

## MONITORING CANADA'S PROGRESS ON THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

Canada has launched a Sustainable Development Goals Data Hub, which will serve as a one-stop online resource with valuable statistics and metrics to measure Canada's progress in achieving the 17 goals of the United Nations 2030 Agenda for sustainable development. Canada will continue to work, through Statistics Canada, with the United Nations and Canadian partners on the global SDG-indicator framework to help Canada and the world measure progress. It is also leading the development of a Canadian Indicator Framework to track progress on SDG implementation in Canada.

## SUSTAINABLE DEVELOPMENT GOALS



Figure 1 – The global sustainable development goals of the 2030 Agenda

## ADVANCING GLOBAL ACTION ON CLIMATE CHANGE

Canada ratified the Paris Agreement in October 2016. In December 2016, Canada's First Ministers adopted the [Pan-Canadian Framework on Clean Growth and Climate Change](#), the policy framework that will enable Canada to achieve our commitments under the Paris Agreement. The Pan-Canadian Framework puts Canada on a path toward meeting our target to reduce greenhouse gas emissions by 30% below 2005 levels by 2030, while also growing the economy and building resilience to a changing climate.

Beyond action at home, we're also helping to maintain global momentum on climate action and implementation of the Paris Agreement. For example, at the 24th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Katowice, Poland, in 2018, Canada played a key role in adopting the Paris rulebook to operationalize the agreement, and announcing the creation of an Indigenous Peoples Focal Point at the UNFCCC. The Focal Point, the first of its kind, will coordinate and lead work on issues related to Indigenous peoples and climate change. It will also promote awareness of Indigenous perspectives on climate change and serve as a technical expert and advisor.

Canada was also one of the first countries to ratify the [Kigali Amendment to the Montreal Protocol](#). The objective

of the amendment is to phase down global emissions of hydrofluorocarbons, which are potent greenhouse gases used in products such as refrigerators, air conditioners and aerosols. To support our commitment to the Kigali Amendment, as well as the Pan-Canadian Framework, we have published regulations to reduce consumption of hydrofluorocarbons by 85% in Canada by 2036.

Finally, [Canada's Feminist International Assistance Policy](#), through its action area on environment and climate action, is guiding Canada's efforts in partner countries to support government planning and initiatives to mitigate and adapt to climate change; to advance women's leadership and decision making; and to create economic opportunities for women in clean energy. Women and girls are particularly at risk when it comes to threats from climate change and environmental degradation. Resource scarcity, coupled with a gender imbalance in household responsibilities, means that climate change has a disproportionate impact on women and girls. However, overwhelming evidence shows that investing in gender equality and the empowerment of women and girls acts as a force multiplier on all other development goals, including environmental goals.

For more information:

- ◆ [Effective action on climate change](#)
- ◆ [COP24 Katowice: annual UN conference on climate change](#)

## THE PAN-CANADIAN FRAMEWORK ON CLEAN GROWTH AND CLIMATE CHANGE

The Pan-Canadian Framework is our plan—developed with the provinces and territories and with input from Indigenous peoples, businesses, non-governmental organizations and Canadians from across the country—to meet our greenhouse gas emissions reduction targets, grow the economy, and build resilience to a changing climate.

The framework is built on 4 pillars: pricing carbon pollution, complementary actions to reduce emissions, adaptation and climate resilience, and clean technology, innovation, and jobs. Under these pillars there are more than 50 concrete measures that cover all sectors of the Canadian economy and put Canada on a path toward meeting our Paris Agreement greenhouse gas emissions reduction target of 30% below 2005 levels by 2030.

Actions under these pillars support goals across our strategy:

- to learn more about our pan-Canadian approach to pricing carbon and other efforts to reduce emissions, as well as activities to build resilience to climate impacts, see the [Effective Action on Climate Change](#) chapter
- to learn more about measures to promote renewable energy and help make communities and businesses more energy efficient, see the [Clean Energy](#) chapter
- to learn more about action to make Canada's infrastructure more resilient to a changing climate, see the [Modern and Resilient Infrastructure](#) chapter
- to learn more about how Canada is driving innovation and growth to ensure Canadian businesses are competitive in the global low-carbon economy, see the [Clean Growth](#) chapter

Additional actions are presented in the Pan-Canadian Framework. Progress on the implementation of the framework is reported to First Ministers on an [annual basis](#). In addition, national actions taken under the framework are reported on through [Canada's regular submission](#) of National Communications and Biennial Reports to the United Nations Framework Convention on Climate Change.

## CANADA'S G7 PRESIDENCY

Key outcomes of the 2018 G7 Summit in Charlevoix were the Charlevoix Blueprint for Healthy Oceans, Seas and Resilient Coastal Communities, the Oceans Plastics Charter and the G7 Plastic Innovation Challenge.

### Charlevoix Blueprint

The [Charlevoix Blueprint for Healthy Oceans, Seas and Resilient Coastal Communities](#) recognizes the direct impact of global temperature rise on oceans and seeks to pursue global efforts towards a sustainable and climate-resilient future, in particular through reducing emissions while stimulating innovation and economic growth, enhancing adaptive capacity, strengthening resilience and reducing vulnerability to the impacts of climate change while ensuring a just transition to the broad participation of women and girls, both at home and in developing countries.

### Ocean Plastics Charter

Canada also spearheaded the development of an [Ocean Plastics Charter](#) as an annex to the Blueprint, which was adopted initially by the leaders of Canada, France, Germany, Italy, the United Kingdom, and the European Union. As of April 2019, 18 governments and 54 businesses and organizations have endorsed the Charter, committing to move toward a more sustainable approach to producing, using and managing plastics, reducing plastic waste and marine litter. Globally, it is estimated that more than 8 million tonnes of plastic enters the oceans every year from land, resulting in at least \$13 billion in damage to marine ecosystems worldwide. Recognizing the significant threat that plastics pose to our freshwater ecosystems, oceans and wildlife, the Charter seeks to advance ambitious targets and solutions for domestic and international action to reduce plastic waste and marine litter. The Charter aims to mobilize all actors to take action on plastic waste, including all levels of governments, industry, civil society and the public.

### G7 Plastic Innovation Challenge

At Charlevoix, Québec, in 2018, Ministers of the Environment were tasked with advancing a G7 Plastics Innovation Challenge. In Halifax in September 2018, G7 Environment Ministers agreed to launch the G7 Innovation Challenge to address marine plastic litter. Recognizing that countries face different issues, G7 countries committed to undertake international and/or domestic initiatives in support of a common objective of developing innovative social or technological solutions throughout the plastics lifecycle. Canada announced \$20 million for international and \$12 million for domestic innovation challenges to address plastic pollution.

## SUPPORTING OTHER INTERNATIONAL AGREEMENTS

In addition to the 2030 Agenda and the Paris Agreement, the FSDS supports a range of other international instruments including the [United Nations Declaration on the Rights of Indigenous Peoples](#) and the [United Nations Convention on Biological Diversity](#).

The United Nations Declaration on the Rights of Indigenous Peoples describes individual and collective rights of Indigenous peoples around the world; offers guidance on cooperative relationships with Indigenous peoples to states and international organizations; and addresses the rights of Indigenous peoples on issues such as culture, identity, religion, language, health, education and community.

Actions in the 2019–2022 strategy that support the declaration include working with Indigenous peoples to conserve species and ecosystems, taking action to protect the environment from degradation and pollution, improving access to nutritious food, and addressing the challenges that remote Indigenous communities face in accessing safe drinking water.

## UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION

Canada officially [re-joined](#) the United Nations Convention to Combat Desertification in March 2017. The convention's objective is to improve the living conditions for people in drylands, to maintain and restore land and soil productivity, and to mitigate the effects of drought.

The objectives of the United Nations Convention on Biological Diversity include the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits from the use of genetic resources.

The 2019–2022 FSDS includes targets that reflect the [2020 Biodiversity Goals and Targets for Canada](#), national objectives that guide collective action on biodiversity conservation in Canada and support progress toward Canada's commitments under the convention. FSDS targets that support these national objectives include those related to coasts and oceans, sustainable food, lands and forests, wildlife and biodiversity, and connecting Canadians with nature.

A close-up photograph of several pink flowers with prominent stamens, likely a species of willow or similar shrub, set against a blurred green background.

## CANADA'S NATURE LEGACY

The Government of Canada invested an historic \$1.35 billion in Budget 2018 in the Nature Legacy to support nature conservation and protection activities, in partnership with others. This includes conserving and protecting at least 17% of our land and freshwater; protecting and recovering species at risk and their habitats; and improving Canada's natural environment. It also includes a \$500 million investment in a new Canada Nature Fund to support protection and conservation of ecosystems, landscapes and biodiversity, including species at risk, and aligns with ocean conservation work under the federal Oceans Protection Plan.

This investment will help us meet our national and international commitments to our 2020 biodiversity goals and targets, based on the UN Convention on Biological Diversity's Strategic Plan 2011–2020, and its global Aichi Biodiversity Targets. Funding through Canada's Nature Legacy also supports our Sustainably Managed Lands and Forests, Healthy Wildlife Populations, and Connecting Canadians with Nature goals.

Achieving Canada's national biodiversity targets requires action and support across all levels of government, Indigenous peoples, municipalities, businesses, the scientific community, non-governmental organizations and individual Canadians. It will rely on meaningful, full and effective participation of Indigenous peoples. Indigenous Knowledge and customary use of biological resources are relevant to achieving all of the goals and targets, including those in the FSDS.

Looking beyond 2020, in November 2018 the Convention on Biological Diversity officially launched a process to develop a global post-2020 biodiversity framework. The framework is expected to be adopted at the 15th Conference of the Parties to the Convention in 2020. In response, we are engaging provinces and territories, Indigenous organizations, non-governmental organizations, industry groups and other partners on Canadian priorities for a post-2020 framework.

## CANADA'S 6TH NATIONAL REPORT TO THE UNITED NATIONS CONVENTION ON BIOLOGICAL DIVERSITY

**Parties to the United Nations Convention on Biological Diversity report every 4 years on their actions to conserve biodiversity. These national reports are key sources of information for the Global Biodiversity Outlook report.**

[Canada's 6th National Report](#), submitted in November 2018, documents Canada's progress in meeting the 2020 Biodiversity Goals and Targets for Canada and focuses on biodiversity conservation actions since 2014.

Indicators developed through the Canadian Environmental Sustainability Indicators program are used to track many of the 2020 Biodiversity Goals and Targets for Canada and have been included in the national report.

For more information:

- ♦ [Annex 3 – Canada in the world](#)
- ♦ [Compendium of Canada's Engagement in International Environmental Agreements](#)

# A SUSTAINABLE DEVELOPMENT VISION FOR CANADA

Our vision for a sustainable Canada is guided by the *Federal Sustainable Development Act*. The Act defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

From an environmental perspective, that means achieving low-carbon, environmentally responsible economic growth, maintaining and restoring our ecosystems, and ensuring Canadians can flourish in clean and healthy environments.

## OUR VISION

Our 2016–2019 FSDS presented the vision that Canada is one of the greenest countries in the world and our quality of life continues to improve. By updating the previous strategy, the 2019–2022 FSDS continues to support that vision.

## OUR PRINCIPLES

Our 2019–2022 FSDS demonstrates our commitment to the principles set out in the *Federal Sustainable Development Act*: the precautionary principle and the principle that sustainable development is based on an ecologically efficient use of natural, social and economic resources.

The precautionary principle is based on the concept that where there are potential threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation. Our commitment to preventing environmental degradation is reflected throughout our strategy—for example, in goals and targets related to climate action, wildlife, lands and forests, freshwater, and coasts and oceans.

The strategy also reflects the principle that sustainable development is based on an ecologically efficient use of natural, social and economic resources. Targets across the FSDS—for example, on clean growth, modern and resilient infrastructure, and building safe and healthy communities—reflect a commitment to advance economic and social objectives without harming the environment.

The 2019–2022 FSDS also reflects other important principles. In particular:

- ♦ in support of the principle of **intergenerational equity**, it demonstrates our commitment to conserve lands, water and wildlife and to address problems we face today—such as climate change—that threaten the well-being of future generations
- ♦ in support of the principle of **openness and transparency**, it brings our sustainable development priorities, goals, targets and actions together in one place and will thus enable parliamentarians and Canadians to track what we’re doing for a greener Canada
- ♦ in support of the principle that **it is important to involve Indigenous peoples**, it acknowledges the vital contributions that Indigenous peoples, governments and organizations make to sustainable development and to achieving our environmental sustainability goals and targets
- ♦ in support of the principle of **collaboration**, it provides the basis for comments and input from partners, Canadians and stakeholders that helped to shape our final strategy; departments and agencies across government will also work collaboratively to achieve our goals and targets
- ♦ in support of the principle that **results and delivery approach is key to meeting measurable targets**, it includes specific, measurable and time-bound targets, supported by indicators, that clearly define what we want to achieve

## OUR GOALS

Thirteen aspirational goals support our sustainable development vision and reflect the Canada we want:



**EFFECTIVE ACTION ON CLIMATE CHANGE**  
A low-carbon economy contributes to limiting global average temperature rise to well below 2 degrees Celsius and supports efforts to limit the increase to 1.5 degrees Celsius



**GREENING GOVERNMENT**  
The Government of Canada will transition to low-carbon, climate-resilient, and green operations



**CLEAN GROWTH**  
A growing clean technology industry in Canada contributes to clean growth and the transition to a low-carbon economy



**MODERN AND RESILIENT INFRASTRUCTURE**  
Modern, sustainable, and resilient infrastructure supports clean economic growth and social inclusion



**CLEAN ENERGY**  
All Canadians have access to affordable, reliable and sustainable energy



**HEALTHY COASTS AND OCEANS**  
Coasts and oceans support healthy, resilient and productive ecosystems



**PRISTINE LAKES AND RIVERS**  
Clean and healthy lakes and rivers support economic prosperity and the well-being of Canadians



**SUSTAINABLY MANAGED LANDS AND FORESTS**  
Lands and forests support biodiversity and provide a variety of ecosystem services for generations to come



**HEALTHY WILDLIFE POPULATIONS**  
All species have healthy and viable populations



**CLEAN DRINKING WATER**  
All Canadians have access to safe drinking water and, in particular, the significant challenges Indigenous communities face are addressed



**SUSTAINABLE FOOD**  
Innovation and ingenuity contribute to a world-leading agricultural sector and food economy for the benefit of all Canadians



**CONNECTING CANADIANS WITH NATURE**  
Canadians are informed about the value of nature, experience nature first hand, and actively engage in its stewardship



**SAFE AND HEALTHY COMMUNITIES**  
All Canadians live in clean, sustainable communities that contribute to their health and well-being



# OUR COMMITMENTS AND PLANS

## Vision

Canada is one of the greenest countries in the world and our quality of life continues to improve

## Goals

Our strategy centres on 13 aspirational goals that reflect the environmentally-focused SDGs, acknowledging our unique responsibilities and circumstances:

- Effective action on climate change
- Greening government
- Clean growth
- Modern and resilient infrastructure
- Clean energy
- Healthy coasts and oceans
- Pristine lakes and rivers
- Sustainably managed lands and forests
- Healthy wildlife populations
- Clean drinking water
- Sustainable food
- Connecting Canadians with nature
- Safe and healthy communities

## Targets and milestones

Medium-term targets that are measurable and time-bound support each goal

Short-term milestones represent interim steps that will help ensure we stay on track to achieve our medium-term targets and long-term goals

## Action plans

Action plans set out what we'll do to achieve our targets, including priority measures as well as other actions that support the targets

## Canada's starting point

What our indicators currently show, and how we'll measure our progress going forward

## Canada In the world

How our goals, targets and actions support the SDGs and contribute to other international agreements and initiatives

## Connections with other FSDS areas

How each FSDS goal supports the achievement of others

## Our partners

Actions others are taking that support our goals and targets

## Take action!

Steps that Canadians can take to help achieve our goals and targets

Table 1 – FSDS goals, targets and responsible ministers

GOAL TITLE	TARGET TITLE	RESPONSIBLE MINISTER
Effective action on climate change	Canada's greenhouse gas emissions	Minister of Environment and Climate Change, supported by a whole-of-government approach to implementation
	Zero-emission vehicles	Minister of Transport
Greening government	Real property and fleet (greenhouse gas emissions reductions)	All ministers
	Real property and fleet (non-hazardous operational waste)	All ministers
	Real property and fleet (plastic waste)	All ministers
	Real property and fleet (construction and demolition waste)	All ministers
	Real property and fleet (domestic office lease transactions)	All ministers
	Real property and fleet (zero-emission vehicles)	All ministers
	Adaptation to climate change	All ministers
	Procurement	All ministers
Clean growth	Federal investment in clean energy research, development and demonstration	Minister of Innovation, Science and Economic Development; Minister of Natural Resources
	Clean technology exports	Minister of Innovation, Science and Economic Development
Modern and resilient infrastructure	Investment in green infrastructure	Minister of Infrastructure and Communities
Clean energy	Clean power generation	Minister of Natural Resources
	Energy efficiency	Minister of Natural Resources
Healthy coasts and oceans	Marine conservation	Minister of Fisheries, Oceans and the Canadian Coast Guard
	Sustainable fisheries	Minister of Fisheries, Oceans and the Canadian Coast Guard
Pristine lakes and rivers	Lake Erie	Minister of Environment and Climate Change
	Lake Winnipeg Basin	Minister of Environment and Climate Change
Sustainably managed lands and forests	Terrestrial ecosystem conservation	Minister of Environment and Climate Change
	Health of national parks	Minister of Environment and Climate Change
	Sustainable forests	Minister of Natural Resources
Healthy wildlife populations	Species at risk	Minister of Environment and Climate Change
	Migratory birds	Minister of Environment and Climate Change
Clean drinking water	Long-term drinking water advisories	Minister of Indigenous Services
Sustainable food	Sustainable agriculture	Minister of Agriculture and Agri-Food
	Sustainable aquaculture	Minister of Fisheries, Oceans and the Canadian Coast Guard
	Agri-food exports	Minister of Agriculture and Agri-Food
Connecting Canadians with nature	Visits to parks and participation in biodiversity conservation	Minister of Environment and Climate Change
Safe and healthy communities	Air quality	Minister of Environment and Climate Change
	Air pollutant emissions	Minister of Environment and Climate Change
	Chemicals Management Plan	Minister of Environment and Climate Change; Minister of Health

➤ Given our whole-of-government approach to climate change, as well as the broad scope of the Pan-Canadian Framework, a number of goals in this strategy will affect Canada's progress toward its climate change targets.

## SUPPORTING THE 2030 AGENDA NATIONAL STRATEGY

The FSDS is a key element of Canada's response to the 2030 Agenda. It sets out what the Government of Canada will do over a 3-year period to support the SDGs, with the focus on their environmental dimensions. Specifically, the 13 FSDS goals directly support 12 of the 17 SDGs:

- ◆ SDG 2: Zero Hunger
- ◆ SDG 3: Good Health and Well-Being
- ◆ SDG 6: Clean Water and Sanitation
- ◆ SDG 7: Affordable and Clean Energy
- ◆ SDG 8: Decent Work and Economic Growth
- ◆ SDG 9: Industry, Innovation and Infrastructure
- ◆ SDG 11: Sustainable Cities and Communities
- ◆ SDG 12: Responsible Consumption and Production
- ◆ SDG 13: Climate Action
- ◆ SDG 14: Life Below Water
- ◆ SDG 15: Life on Land
- ◆ SDG 17: Partnerships for the Goals

The FSDS will contribute to the broader whole-of-society 2030 Agenda National Strategy, which aims to accelerate progress on all 17 SDGs.

See Annex 3 for further details on how the FSDS aligns with individual SDGs and targets.



# WORKING TOGETHER

## WHERE WE ARE NOW

As we chart our path forward, we need to take into account how Canada currently performs on sustainable development compared with other countries. Studies that rank countries on sustainability performance provide insight into where Canada is doing well and where we still need to improve.

For example, the [2018 Yale Environmental Performance Index](#) ranked Canada 25th out of 180 countries on environmental health. Canada's ranking stayed the same between the 2016 and 2018 indices. The 2018 assessment showed that Canada is doing well in air quality (ranking fourth), exposure to heavy metals (10th) and sustainable agriculture (12th). Canada scores lower on climate and energy (137th), sustainable fisheries (121st), and air pollutant emissions intensity (110th).

The [2018 SDG Index and Dashboards Report](#), led by Professor Jeffrey Sachs, ranked Canada 20th of 156 countries in terms of implementing the SDGs. It shows that Canada is doing well on SDG 4, quality education; and SDG 7, affordable and clean energy. More action is needed to achieve SDG 12, responsible consumption and production; SDG 13, climate action; and SDG 17, partnerships for the goals.

Our strategy includes goals and targets to drive further progress in areas where we're doing well and to help us advance in areas where we continue to face challenges. For example:

- ♦ our Safe and Healthy Communities goal includes targets to further improve air quality in Canadian communities and protect Canadians from risks posed by harmful substances
- ♦ our Sustainable Food goal includes a target aimed at ensuring that agricultural land supports biodiversity and that farming does not compromise water and soil quality
- ♦ our Effective Action on Climate Change goal shows what we'll do, in partnership with provinces and territories and with meaningful involvement with Indigenous peoples, to work toward our target to reduce Canada's greenhouse gas emissions 30% from 2005 levels by 2030, as well as to grow the economy and build climate resilience

## LEADING BY EXAMPLE

We know that we need to lead by example when it comes to reducing greenhouse gas emissions. Our 2016–2019 strategy sets a target of reducing emissions from Government of Canada operations 40% from 2005 levels by 2030, with the aspiration to achieve the target by 2025. We're well on our way to meeting our target: during the 2017–2018 fiscal year, our emissions were down 32% from 2005 levels.

Building on commitments in the 2016–2019 FSDS, the [Greening Government Strategy](#) sets an ambitious target to reduce our emissions 80% from 2005 levels by 2050, with an aspiration to be carbon neutral. The Centre for Greening Government, within Treasury Board of Canada Secretariat, provides leadership by tracking federal greenhouse gas emissions centrally, coordinating efforts across government, and driving results.

Our Greening Government Strategy also recognizes that greening our operations goes beyond reducing greenhouse gas emissions. It also includes measures to make our operations resilient to a changing climate, reduce our water consumption, and shrink the environmental footprint of our waste, including plastic waste.

For more information:

- ♦ [Greening government](#)

## SUPPORTING DECISION MAKING FOR SUSTAINABLE DEVELOPMENT

Decision makers need to know about the environmental effects of proposed policies, plans and programs to make informed, sustainable decisions. As a result, all federal departments and agencies are expected to assess potential environmental effects when developing proposals, to provide the results of their assessments to ministers and Cabinet, and to communicate the results to Canadians.

We're committed to continuing to strengthen these assessments (known as strategic environmental assessments or SEAs) across government. This supports our promise to Canadians to make decisions based on evidence and to set a higher bar for openness and transparency in government.

Since our 2016–2019 strategy was tabled, we've updated guidance for departments to ensure that SEA requirements are applied to documents going to Cabinet and Treasury Board. This includes considering whether proposals could affect the goals and targets set out in the FSDS. Individual federal departments are also strengthening their SEA tools and practices. Departments and agencies will continue to include commitments and results related to SEA implementation in their sustainable development strategies and reports.

For more information:

- ♦ [Strategic environmental assessment](#)
- ♦ [Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals](#)
- ♦ [SEA public statements](#)

## REFORMING OUR ENVIRONMENTAL AND REGULATORY PROCESSES

Conducting robust and thorough environmental assessments, respecting the rights of Indigenous peoples, and implementing strong environmental legislation will support progress in all areas of the FSDS.

We committed to restore lost protections, regain public trust and introduce new, fair processes. We are following through on our commitment. In February 2018, we introduced [legislation](#) that would put in place better rules to protect our environment, fish and waterways, and rebuild public trust. The proposed changes include:

- ♦ restoring public trust through increased opportunities for public participation
- ♦ recognition of Indigenous rights
- ♦ ensuring “one project, one review” through cooperation with provinces, territories and Indigenous jurisdictions
- ♦ undertaking more comprehensive impact assessments
- ♦ making timely decisions
- ♦ ensuring transparent, science-based decisions
- ♦ protecting the environment

Budget 2018 also announced \$1 billion over 5 years, starting in 2018–2019, to:

- ♦ support the proposed new impact assessment system
- ♦ increase scientific capacity in federal departments and agencies
- ♦ implement the changes required to protect water, fish and navigation
- ♦ increase Indigenous and public participation

For more information:

- ♦ [Environmental and regulatory reviews](#)
- ♦ [Introducing the proposed amended \*Fisheries Act\*](#)

## WORKING WITH PARTNERS

Partners such as provinces and territories, Indigenous peoples, municipalities, businesses, scientists, non-governmental organizations, and individual Canadians all make important contributions that are essential to achieving meaningful sustainable development results.

For example, federal, provincial, and territorial governments are working together, as well as with Indigenous peoples, to implement the Pan-Canadian Framework on Clean Growth and Climate Change.

We’re committed to working in partnership with Indigenous peoples and listening to their diverse voices and perspectives. Given Indigenous peoples’ unique understanding of and connection to Canada’s lands and waters, their involvement in environmental policy development and decision making is essential.

Indigenous peoples are valued partners in areas such as the recovery of species at risk and the management of national parks and protected areas. They contribute Indigenous Knowledge that supports decision making in areas such as biodiversity conservation and the sustainable use of biological resources. Indigenous governments are also taking action to manage natural resources and protect the environment on their lands, including by establishing environmental protection legislation.

Cities and communities have a major impact on Canada’s

## RENEWING OUR SUSTAINABLE DEVELOPMENT APPROACH

Our 2016–2019 FSDS provides important improvements over past strategies, including more aspirational goals, stronger targets, and broader participation across government as well as by our partners and stakeholders. The *Federal Sustainable Development Act* is the law that requires us to table and report on the strategy. When it comes into force, *An Act to amend the Federal Sustainable Development Act* will introduce changes to the *Federal Sustainable Development Act* that will support more effective, inclusive and accountable strategies. These changes respond to recommendations of the House of Commons Standing Committee on Environment and Sustainable Development.

Once in force, the amendments will:

- ♦ shift the focus more broadly to sustainable development decision-making, rather than only environmental decision-making
- ♦ expand the number of federal organizations required to prepare sustainable development strategies from 26 to more than 90
- ♦ promote close collaboration and coordinated action across government
- ♦ add 3 additional Indigenous representatives to, and modify the role of the Sustainable Development Advisory Council
- ♦ set a higher bar for transparency with improved reporting and oversight
- ♦ support an ongoing conversation with Indigenous peoples and all Canadians, respecting diversity and gender parity

For more information:

- ♦ [An Act to amend the Federal Sustainable Development Act](#)
- ♦ [Report to the House of Commons on Environment and Sustainable Development: federal sustainability](#)

sustainability. They make decisions related to public transit, waste management, infrastructure and buildings that affect greenhouse gas emissions, air quality, water quality and more. Their decisions also influence Canadians' quality of life. Among other contributions, municipalities are essential partners in our historic infrastructure investments.

Canadian businesses also play a key role, including by developing clean technologies that contribute to a low-carbon economy. However, the role of the business community goes beyond clean technology. From natural resources to service industries, and from co-operatives to social enterprises, businesses are adopting sustainable practices and working to reduce their environmental footprint.

Science and data underpin our sustainable development agenda, from climate change policy to water stewardship to biodiversity protection. Canada's scientists generate knowledge that supports progress in these and other areas. They also contribute to international initiatives—for example, to assessment reports of the [Intergovernmental Panel on Climate Change](#).

Finally, non-governmental organizations contribute by advocating for sustainable development, carrying out public education and outreach, and taking action on the ground to protect the environment. For example, they support habitat conservation on private lands, participate in multi-stakeholder invasive species councils, and engage Canadians in citizen science initiatives.

## LEADING ON PLASTIC WASTE

Tackling plastic waste is a priority for Canadians and for the Government of Canada. We will continue to work with partners over the next 3 years to move toward a circular economy for plastics by pursuing zero plastic waste.

Actions to address plastic waste support 3 goals across our strategy:

- ♦ to learn more about actions to address plastic waste in our own operations, including increasing the diversion of plastic waste, reducing our unnecessary use of single-use plastics and procuring more sustainable plastics products, see the Greening Government chapter
- ♦ to learn more about work with provinces and territories to implement the Canada-wide strategy on zero plastic waste and keep plastics in the economy and out of landfills, see the Clean Growth chapter
- ♦ to learn more about work to respond to the urgent problem of plastics pollution in the ocean, including supporting global action to address lost and abandoned fishing gear and plastic litter from ships, see the Healthy Coasts and Oceans chapter

## UNITED NATIONS GLOBAL COMPACT

Global Compact Network Canada (GCNC) is the Canadian network of the United Nations Global Compact, the world's largest voluntary corporate sustainability initiative that includes over 9000 businesses in over 160 countries.

The GCNC is dedicated to assisting over 85 Canadian organizations, including businesses, non-profit, investors and universities, with the advancement of the 17 Sustainable Development Goals and the 10 Principles of the UN Global Compact on Labour, Environment, Anti-Corruption and Human Rights.

Since tabling our 2016–2019 Federal Sustainable Development Strategy, we've worked with the network to host an interactive panel discussion with the Canadian private sector on advancing collaboration on sustainable development in Canada, as well as to host a webinar during public consultations on the 2019–2022 strategy.



For more information:

- [Global Compact Network Canada](#)



## TOWARD A NEW ARCTIC POLICY FRAMEWORK

The Government of Canada is co-developing a new Arctic and Northern Policy Framework with territorial, provincial and Indigenous partners. The framework represents a new way for Arctic and northern peoples, governments, leaders, organizations, and institutions to come together to set a consensus-based course towards better outcomes for everyone.

The framework will provide overarching direction to our priorities, activities, and investments in the Arctic and North, with a horizon of 2030. It is informed by the United Nations 2030 Agenda for Sustainable Development, and aligns with the 2030 Agenda's 17 SDGs. The framework builds upon work previously undertaken by Canada's co-development partners to identify their own priorities. This includes the Pan-Territorial Vision for Sustainable Development, released in August 2017 by the governments of Yukon, Northwest Territories and Nunavut.

Budget 2019 proposes a number of new measures to support the framework and complement existing efforts to strengthen Arctic and northern communities. These measures include proposed investments to create a Canada-based permanent secretariat for the Sustainable Development Working Group of the Arctic Council.

## TAKE ACTION!

There's a lot that you can do to advance sustainable development. Throughout our strategy, you'll find suggestions for steps that you can take for a greener and more resilient Canada, from making your home more efficient, to walking or biking to work, to volunteering your time to help conserve nature.

You can also make a difference by taking part in the ongoing conversation around sustainable development in Canada. Tell us about your sustainable development vision and priorities and let us know how you contribute to a greener Canada.

Continue to share your ideas, stories and videos on our [Get Involved](#), our interactive engagement website, and reply to our Facebook posts or tweet with the hashtag #SustDev. You can always contact us at [ec.bdd-sdo.ec@canada.ca](mailto:ec.bdd-sdo.ec@canada.ca) to join our mailing list and learn about upcoming webinars.



# EFFECTIVE ACTION ON CLIMATE CHANGE



## LONG-TERM GOAL

**A low-carbon economy contributes to limiting global average temperature rise to well below 2 degrees Celsius and supports efforts to limit the increase to 1.5 degrees Celsius**

## WHY IS THIS ISSUE IMPORTANT?

Climate change is a critical global problem that could affect future generations' ability to meet their basic needs. Greenhouse gas emissions have the potential to warm the planet to levels never experienced in the history of human civilization, with far-reaching and unpredictable environmental, social, and economic consequences.

The effects of climate change are already being felt across Canada. We are seeing rising sea levels, more frequent and severe wildfires and pest outbreaks, erosion of coastlines, and more extreme weather events such as storms and heat waves. More and more often, climate change is also being identified as a key driver of serious infectious diseases. Recent events—such as flooding in New Brunswick, Ontario and Quebec in 2019, the spread of Lyme disease into eastern Canada, the British Columbia wildfires in 2017 and 2018 and the Alberta Fort McMurray wildfires in 2016—demonstrate the risks we face.

Indigenous peoples on the land face disproportionate impacts, such as reductions in sea ice and snow cover which disrupt travel routes and reduce access to country foods in the North. This is worsened by warming rates that are faster in Canada's north than in the rest of the country.

Effective action on climate change means transitioning to a low-carbon economy—we can reduce our greenhouse gas emissions while increasing our prosperity by realizing the opportunities in emerging markets such as renewable energy and clean technology.

While reducing emissions is necessary to help lessen the severity of climate impacts in the future, we also need additional efforts to build resilience to these impacts. Adaptation is key in addressing climate change, and is about making smart, informed, forward-looking decisions that take future climate conditions into account. Effective adaptation measures can save lives, minimize damages, and lower costs over the long term for individuals, businesses, organizations, and governments.

## THE PAN-CANADIAN FRAMEWORK ON CLEAN GROWTH AND CLIMATE CHANGE

**By avoiding the worst impacts of climate change and harnessing clean growth, transitioning to a low-carbon economy represents significant opportunities for Canada and the world.**

The [Pan-Canadian Framework on Clean Growth and Climate Change](#) was adopted on December 9, 2016, as Canada's plan to take ambitious action to fight climate change, build resilience to a changing climate, and drive clean economic growth.

**A landmark achievement, the Pan-Canadian Framework is the first climate change plan in Canada's history to include joint and individual commitments by federal, provincial and territorial levels of government, and to have been developed with input from Indigenous peoples, businesses, non-governmental organizations, and Canadians from across the country.**

## MEDIUM-TERM TARGETS

- ◆ By 2030, reduce Canada's total greenhouse gas emissions by 30%, relative to 2005 emission levels
- ◆ Zero-emission vehicles will represent 10% of new light-duty vehicle sales by 2025, 30% by 2030 and 100% by 2040

## SHORT-TERM MILESTONES

- ◆ Work with provinces and territories to ensure carbon pricing is in place across Canada in a way that meets the federal carbon pricing benchmark
- ◆ Implement regulatory measures to reduce greenhouse gas emissions, including:
  - ◆ the phase-out of traditional coal-fired electricity by 2030
  - ◆ reducing methane emissions from the oil and gas sector by 40-45% by 2025

- ♦ ongoing regulations for light- and heavy-duty vehicles
- ♦ a Clean Fuel Standard to encourage the use of low-carbon fuels in transportation, buildings and industry
- ♦ By 2019, 60% of communities (based on a representative sample of small, medium and large Canadian municipalities) identify adaptation measures in their plans, strategies, and reports
- ♦ By 2022, at least 100 projects across the country benefit from the [Low Carbon Economy Fund](#) and have reduced their emissions

### LEADING ON ZERO-EMISSION VEHICLES

**Budget 2019 proposed strategic investments that will make it easier and more affordable for Canadians to choose zero-emission vehicles—helping people to get from place to place, improving air quality and cutting greenhouse gas emissions at the same time. These include:**

- ♦ **funding to deploy new recharging and refueling stations in workplaces, public parking spots, commercial and multi-unit residential buildings, and remote locations**
- ♦ **working with auto manufacturers to secure voluntary zero-emission vehicle sales targets to ensure that vehicle supply meets increased demand**
- ♦ **introducing a new federal purchase incentive of up to \$5000 for eligible vehicles with a manufacturer's suggested retail price of less than \$45 000**
- ♦ **supporting businesses' adoption of zero-emission vehicles by making these vehicles eligible for a full tax write-off in the year they are put in use**

### RESPONSIBLE MINISTERS/KEY DEPARTMENTS AND AGENCIES

Minister of Environment and Climate Change, supported by a whole-of-government approach to implementation/ Agriculture and Agri-Food Canada; Canadian Institutes of Health Research; Crown-Indigenous Relations and Northern Affairs Canada; Department of Finance Canada; Environment and Climate Change Canada; Fisheries and Oceans Canada; Global Affairs Canada; Health Canada; Indigenous Services Canada; Infrastructure Canada; Innovation, Science and Economic Development Canada; National Research Council Canada; Natural Resources Canada; Parks Canada; Public Health Agency of Canada; Public Safety Canada; Public Services and Procurement Canada; Standards Council of Canada; Transport Canada

### PRICING CARBON POLLUTION

**Putting a price on carbon pollution is central to the Pan-Canadian Framework. It is the most efficient way to reduce greenhouse gas emissions and support innovation and clean growth.**

**The pan-Canadian approach to pricing carbon pollution gives provinces and territories the flexibility to develop their own carbon pollution pricing system and outlines criteria that all systems must meet to ensure they are stringent, fair and efficient.**

### CANADA'S STARTING POINT

- ♦ To measure Canada's contribution to limiting global temperature rise, we track human-caused national greenhouse gas emissions. In 2017, Canada's total emissions were 716 megatonnes of carbon dioxide equivalent. Since 2005, emissions have decreased by 15 megatonnes of carbon dioxide equivalent.
- ♦ To monitor the transition to a low-carbon economy, we track Canada's greenhouse gas intensity, or emissions of carbon dioxide equivalent per billion dollars gross domestic product (GDP). In 2017, greenhouse gas intensity was 0.36 megatonnes of carbon dioxide equivalent per billion dollars GDP, 20% lower than 2005 and 36% lower than in 1990.
- ♦ To measure adaptation to climate change, we use surveys to assess awareness and action. By 2017, 72% of communities (based on a representative sample of small, medium and large Canadian municipalities) had identified adaptation measures in their plans, strategies and reports.
- ♦ To measure impacts of climate change, we track indicators such as snow cover, sea ice, and temperature change in Canada. The [2019 Canada in a Changing Climate Report](#) showed that:
  - ♦ snow-cover in Canada has decreased 5–10% per decade since 1981
  - ♦ sea ice has decreased 5–20% per decade (summer) and 8% per decade (winter)
  - ♦ between 1948 and 2016, the average annual temperature in Canada has warmed by 1.7 degrees Celsius
- ♦ The [Canadian Environmental Sustainability Indicators](#) program provides further information on climate change in Canada.

## OUR ACTION PLAN

### KEY PRIORITIES

- In support of our greenhouse gas emission reduction target and our Effective Action on Climate Change goal, we will continue to implement the [Pan-Canadian Framework on Clean Growth and Climate Change](#), which includes commitments under 4 pillars: pricing carbon pollution; complementary measures to reduce emissions across the economy; adaptation and climate resilience; and clean technology, innovation and jobs. We will continue to strengthen our collaboration with Indigenous peoples and support their climate leadership in mitigation and adaptation actions, based on recognition of rights, respect, and cooperation.
- In support of our greenhouse gas emission reduction target, we have launched the [Low Carbon Economy Leadership Fund in 2017](#), which is providing \$1.4 billion over 5 years to provinces and territories to leverage investments in projects that will generate clean growth and reduce emissions. In addition, in 2017 we launched the [Low Carbon Economy Challenge](#), which will invest more than \$500 million over 5 years to leverage Canadian ingenuity to reduce emissions and generate clean growth.
- In support of our greenhouse gas emission reduction target, we will support remote and northern communities in building capacity and reducing greenhouse gas emissions, including supporting reduced reliance on diesel through programs including the [Generating New Opportunities: Indigenous Off-diesel Initiative](#) and the [Clean Energy for Rural and Remote Communities Program](#).
- In support of our greenhouse gas emission reduction target, we will continue to review measures that could be considered inefficient related to fossil fuel subsidies, with a view to reforming them as necessary. As part of that work, Canada recently committed to undergo a peer review of inefficient fossil fuel subsidies under the Group of Twenty (G20) process. This voluntary process is expected to compare and improve knowledge, and push forward the global momentum to identify and reduce inefficient fossil fuel subsidies.
- In support of our zero-emission vehicle target, Budget 2019 proposed to provide \$300 million over 3 years, starting in 2019–2020, for a new federal purchase incentive of up to \$5000 for eligible vehicles with a manufacturer's suggested retail price of less than \$45 000. It also included a commitment to work with auto manufacturers to secure voluntary zero-emission vehicle sales targets to ensure vehicle supply meets demand. On May 1, 2019, we launched the [Incentives for Zero-Emission Vehicles \(iZEV\) Program](#).
- In support of our Effective Action on Climate Change goal, we support the [Task Force on Climate-related Financial Disclosures'](#) voluntary international disclosure standards and a phased approach to adopting them by major Canadian companies, as appropriate. By supporting these standards, we aim to raise firms' awareness of the importance of tracking, managing, and disclosing material climate-related risks and opportunities in a consistent and comparable way. We will also encourage adoption by federal Crown corporations where appropriate and relevant to their business activities.
- In support of our Effective Action on Climate Change goal, Budget 2019 proposed to provide \$151 million over 5 years, starting in 2019–2020, and \$9.28 million per year ongoing, to improve emergency management in Canada. This includes helping to ensure communities and infrastructure are resilient to natural disasters, such as forest fires and floods.
- In support of our Effective Action on Climate Change goal, we have established [Canada's Expert Panel on Sustainable Finance](#). We recognize that the cost of transitioning to a low-carbon economy is substantial, and that private capital will need to be mobilized to support this transition. The panel is consulting the private sector, and in particular Canada's financial sector, on issues related to sustainable finance such as climate-related disclosures and investments that consider environmental factors.
- In support of our Effective Action on Climate Change goal, we will continue to support international efforts to combat climate change, including by advancing implementation of the Paris Agreement, following through on our historic \$2.65 billion commitment to support climate action in developing countries between 2016 and 2021, and taking action to implement, promote, and support the Kigali Amendment to phase down hydrofluorocarbons.
- In support of our Effective Action on Climate Change goal, we will continue to advance adaptation and build resilience to climate change across Canada, including by:
  - fostering collaboration through [Canada's Climate Change Adaptation Platform](#) by addressing knowledge gaps, enabling knowledge exchange and dissemination of tools, and developing capacity to help decision makers take action
  - supporting large-scale infrastructure projects through the Budget 2017 commitment to invest \$2 billion over 11 years, starting in 2017–2018, for a [Disaster Mitigation and Adaptation Fund](#) to strengthen community infrastructure against the effects of climate change
  - maintaining the [Canadian Centre for Climate Services](#) to help Canadians improve their understanding of how the climate is changing and provide data, tools, guidance and other resources to support climate-smart decisions
  - improving our understanding of how climate change is affecting northern transportation infrastructure and our capacity to adapt through the [Northern Transportation Adaptation Initiative](#)
  - developing a new strategy to sustainably manage water and land in the Prairies, in partnership with the provinces of Alberta, Saskatchewan and Manitoba as well as Indigenous partners, academics and private sector groups
  - improving our weather and water services by strengthening the science underpinning them and enhancing our ability to deliver earlier and more accurate information about environmental conditions and extremes such as severe weather and flooding
  - maintaining the [WeatherCAN mobile weather app](#), which provides real-time weather forecasts and alerts to Canadians
  - providing \$65 million over 5 years through Budget 2017 to implement the health elements outlined in the Pan-Canadian Framework on Clean Growth and Climate Change

## CONTRIBUTING ACTIONS

Actions already planned and underway will support the implementation of the Pan-Canadian Framework. To accelerate the transition to a low-carbon economy and make communities more resilient, we will:

### Use legislation and regulations to limit greenhouse gas emissions

Establish and implement legislation and regulations to address climate change and meet our commitments—including, for example:

- ♦ implementing the federal carbon pollution pricing system in 2019 in provinces and territories that request it or do not have systems in place that align with the federal standard; direct proceeds collected under the federal system will be returned to the jurisdiction of origin:
  - ♦ for jurisdictions that have requested the federal system, proceeds will be returned directly to the governments of these jurisdictions
  - ♦ for jurisdictions whose systems do not meet the federal standard for reducing carbon pollution, Climate Action Incentive payments will return the bulk of direct proceeds from the fuel charge to individuals and families through their personal income tax returns; the remaining proceeds will support particularly affected sectors in those provinces.
- ♦ implementing amended coal-fired electricity regulations to accelerate the phase out of traditional coal-fired electricity generation by 2030
- ♦ implementing new performance standards imposing emissions limits on natural-gas-fired electricity generation
- ♦ implementing regulations to reduce methane emissions from the oil and gas sector by 40–45% by 2025
- ♦ implementing updated *Energy Efficiency Regulations* to remove the lowest-performing energy-using products from the market
- ♦ developing a [Clean Fuel Standard](#) to reduce Canada's greenhouse gas emissions through the increased use of lower-carbon fuels and alternative technologies

### Provide support and funding for climate resilience

Provide funding for First Nations, Inuit communities and the Métis Nation to develop:

- ♦ climate change risk and adaptation strategies through the [Climate Change Preparedness in the North Program](#) and the [First Nation Adapt Program](#)
- ♦ community-based climate change data through the [Indigenous Community-Based Climate Monitoring Program](#)

- ♦ community and regional health adaptation plans through the [Climate Change and Health Adaptation Program](#)

Support adaptation projects in various sectors to improve training, build capacity, support evaluation, and promote information sharing, with a focus on northern transportation infrastructure.

### Work with partners on climate change

Work closely with provincial, territorial, municipal, and Indigenous partners as well as businesses, non-governmental organizations, academics, experts, Canadians, and stakeholders to meet our climate change objectives. This includes:

- ♦ working with provinces and territories to ensure carbon pollution pricing applies to a broad set of emission sources across Canada with increasing stringency over time
- ♦ continuing to work with transportation stakeholders to reduce greenhouse gas emissions through voluntary mechanisms such as the [Memorandum of Understanding with the Railway Association of Canada for Reducing Locomotive Emissions](#) and [Canada's Action Plan to Reduce Greenhouse Gas Emissions from Aviation](#)
- ♦ engaging and collaborating with Indigenous peoples on policies, programs and other priorities, including through distinctions-based bilateral tables with First Nations, Inuit, and the Métis Nation
- ♦ supporting the provinces and territories in implementing measures to protect Canadians from heat events, such as the Heat Alert and Response Systems
- ♦ working in collaboration with partners and stakeholders to prepare for and protect Canadians from climate-driven infectious diseases through the Infectious Disease and Climate Change Fund
- ♦ continuing to build resilience and understand risks for vulnerable coastal regions
- ♦ supporting students, youth, Indigenous peoples, and small and medium-sized businesses to increase climate change awareness through the [Climate Action Fund](#)
- ♦ convening [Canada's Climate Change Adaptation Platform](#), a national, multi-stakeholder forum that addresses shared priorities for advancing adaptation and building resilience to climate change across Canada
- ♦ working with the provinces through the [Building Regional Adaptation Capacity and Expertise Program](#) to help build capacity for Canadian decision makers to take adaptation action
- ♦ working with provinces and territories that have adopted the Pan-Canadian Framework on Clean Growth and Climate Change to help them deliver on leadership commitments to reduce greenhouse gas emissions, including those outlined in the framework, through the Low Carbon Economy Leadership Fund

- ♦ supporting the Pan-Canadian Expert Collaboration's new independent institute focused on clean growth and climate change to generate, communicate, and mobilize trusted information, policy advice, and best practices for Canadians, governments, and stakeholders
- ♦ establishing the Advisory Council on Climate Action, which will help identify further opportunities to reduce carbon pollution in the transportation and building sectors, building on the commitments in Canada's national climate plan, in a manner that creates opportunities for businesses and workers and leverages sustainable finance

### **Take a leading role in international agreements and initiatives on climate change**

Continue to demonstrate a strong commitment to international leadership on clean growth and climate change, including by:

- ♦ delivering on the 2015 pledge to provide \$2.65 billion in climate finance between 2016 and 2021 to help developing countries transition to a low-carbon, climate-resilient economy
- ♦ continuing to push forward the global momentum to identify and reduce inefficient fossil fuel subsidies through the G20 process, including by undergoing a peer review in partnership with Argentina
- ♦ promoting the global reduction of greenhouse gas emissions through the Powering Past Coal Alliance, co-founded by Canada and the United Kingdom
- ♦ implementing recommendations of the Arctic Council's Expert Group on Black Carbon and Methane to contribute to the achievement of the collective goal on black carbon
- ♦ joining Mexico, Chile, Colombia, Costa Rica and 2 US states through the [Declaration on Carbon Markets in the Americas](#) to enhance collaboration on carbon pricing
- ♦ implementing the [Sendai Framework for Disaster Risk Reduction](#) to create a safer and more resilient Canada
- ♦ continuing to collaborate with partners at the International Civil Aviation Organization and International Maritime Organization to ensure continued action on climate change and greenhouse gas emission reductions
- ♦ promoting substantive climate change provisions in Canada's free trade agreements

### **Develop a solid base of scientific research and analysis on climate change**

Continue to track Canada's greenhouse gas emissions, collect emissions data, provide information to support policy development and help Canadians make climate-related decisions. This includes:

- ♦ supporting the new [Canadian Centre for Climate Services](#), an important part of the Pan-Canadian Framework and the official source for reliable climate

information, data and tools, training and user support to help increase climate resilience across Canada

- ♦ collaborating with subject-matter experts to develop Canada in a [Changing Climate: Advancing our Knowledge for Action](#), the next national assessment of how Canada's climate is changing; the impacts of these changes on our communities, environment, and economy; and how we are adapting
- ♦ conducting scientific research, modelling and analysis to build knowledge of climate change and its impacts, including enhanced monitoring of the health impacts of climate change
- ♦ working with partners both nationally and internationally to advance research projects to better understand the impacts of heat on human health to inform risk assessments, communication and adaptation actions
- ♦ translating scientific information and Indigenous Knowledge into action
- ♦ preparing Canada's annual National Inventory Report on Greenhouse Gas Sources and Sinks in Canada and submitting it to the United Nations Framework Convention on Climate Change

### **Support businesses and Canadians in taking action to reduce greenhouse gas emissions**

Continue to support Canadian communities, businesses and stakeholders in reducing emissions and increasing resilience, including through increased energy efficiency. This includes:

- ♦ setting and updating vehicle emission standards and improving the efficiency of vehicles and transportation systems through technological and other solutions
- ♦ developing and implementing technology roadmaps for high efficiency heating products in Canada with provinces, territories, academia, and private sector stakeholders
- ♦ supporting a shift to lower-emitting transportation, including by investing in infrastructure and through tax measures
- ♦ supporting decision making through benchmarking tools and energy-efficiency certifications and labels for equipment, appliances, industrial facilities and buildings
- ♦ delivering the Champions (\$450 million) and Partnerships (\$50 million) streams of the Low Carbon Economy Challenge to support businesses in reducing greenhouse gas emissions and driving clean economic growth

## CONNECTIONS WITH OTHER FSDS AREAS



Climate change affects our ecosystems, our livelihoods, our safety and security, and our health. Many FSDS goals and targets relate directly to climate change action and support the implementation of the Pan-Canadian Framework. In particular:

- ♦ building a cleaner energy system and investing in clean technology will reduce our greenhouse gas emissions and help us transition to a low-carbon economy
- ♦ investing in resilient infrastructure, and developing and updating building codes and standards, will help lessen the potential economic, environmental and social impacts of climate change
- ♦ to do our part to mitigate climate change, we are reducing greenhouse gas emissions and increasing the resilience of our own government operations
- ♦ taking action on climate change can help mitigate impacts on coastal and marine areas such as changing sea levels, ocean chemistry, temperature and marine life
- ♦ climate change is affecting the health of lakes and rivers by potentially affecting nutrients, pH, and temperature, and putting pressure on Canada's water resources
- ♦ sustainable agricultural practices can increase carbon sequestration in soil and lessen food insecurity, especially in the north
- ♦ actions related to forests and other ecosystems can provide natural solutions to climate change and protect communities from climate change impacts and extreme weather
- ♦ reducing greenhouse gas emissions and supporting adaptation can prevent negative impacts on the health and well-being of Canadians as well as on air quality

## CANADA IN THE WORLD

Taking action on climate change supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 3, Good Health and Well-Being; SDG 7, Affordable and Clean Energy; SDG 9, Industry, Innovation and Infrastructure; SDG 11, Sustainable Cities and Communities; SDG 12, Responsible Consumption and Production; SDG 13, Climate Action; SDG 14, Life Below Water; SDG 15, Life on Land; and SDG 17, Partnerships for the Goals. It also supports specific SDG targets, as well as other international agreements and initiatives.

For details on how this goal supports international action, see Annex 3.

## TAKE ACTION!

- Take public transit or explore active transportation to get around
- If you drive, avoid idling or choose a zero-emission vehicle
- Arrange an EnerGuide home evaluation and act on the results
- Generate or purchase green electricity for your home
- Purchase energy efficient appliances and equipment; look for ENERGY STAR® certified products where possible
- Reduce the amount of waste (including food waste) that you generate; compost and recycle to reduce greenhouse gas emissions from landfills and from producing new materials
- Unplug electronics when you're not using them
- Keep up to date with maintenance on your car and home appliances to improve efficiency and lifespan (for example, clearing vents on your appliances and keeping tires inflated)
- Plant trees to sequester carbon, increase the urban forest canopy, provide shade for natural cooling, and improve air quality
- Flood proof your home, including by cleaning out eavestroughs and redirecting down spouts away from your home
- Prepare a 72-hour emergency kit with food, water and other key supplies to protect your family and community during extreme events including heat waves, flooding or wildfire
- Use rain barrels to collect rainwater for reuse

## OUR PARTNERS

Partners, including provinces, territories and Indigenous peoples, are at the forefront of action on climate change. Provinces and territories are working with us to implement the Pan-Canadian Framework and have made significant progress, including by implementing carbon pricing systems, increasing clean electricity production, taking steps to increase energy efficiency requirements for new buildings, and encouraging adoption of zero-emission vehicles.

Indigenous peoples contributed to the development of the Pan-Canadian Framework and continue to be engaged in its implementation, including through distinctions-based bilateral tables and specific programs. For example, Indigenous peoples are developing community based solutions to address risks through adaptation plans, health assessments and monitoring. They are also working together and partnering with governments and businesses to demonstrate and install renewable energy systems and reduce the use of diesel-fired electricity generation in their communities.

Building resilience is an important part of the Pan-Canadian Framework, and many provinces and territories have established climate change adaptation strategies or incorporated resilience into broader climate change strategies.

Other partners also have a role to play. [Municipal governments can influence about 50% of Canada's greenhouse gas emissions](#) and are taking actions such as retrofitting their facilities to generate renewable energy, implementing district energy systems, and installing charging stations for electric vehicles. To support municipalities in building resilient and sustainable cities, Budget 2019 proposed to invest \$950 million to increase energy efficiency in residential, commercial and multi-unit buildings. These investments will be delivered by the Federation of Canadian Municipalities through the Green Municipal Fund (see Clean Energy).

Local health authorities and municipalities are also taking steps such as implementing Heat Alert and Response Systems and flood defences to address projected sea level rise. Energy utilities and provincial energy efficiency program administrators promote highest-efficiency products and technologies to help businesses and consumers lower energy use, save on rising energy costs, and increase competitiveness.

The private sector is taking action too. Some companies are integrating climate considerations into their investment, planning, and operational decisions in order to improve their long-term resilience and competitiveness. Many professional associations are also working to inform and equip their members to address a changing climate in their professional practice. And more than 20 Canadian companies are private sector partners of the [Carbon Pricing Leadership Coalition](#), which supports and encourages successful implementation of carbon pricing around the world.

### PARTNERS TAKING ACTION

#### EDMONTON'S CHANGE HOMES FOR CLIMATE: ENERGUIDE FOR HOMES PROGRAM

In June 2017, the City of Edmonton launched the [Change Homes for Climate: EnerGuide for Homes program](#) to raise awareness of residential energy use and reduce greenhouse gas emissions by increasing the number of energy efficient actions taken by Edmontonians in their homes, like upgrading their insulation or replacing their inefficient furnace. This initiative supports Edmonton's Community Energy Transition Strategy, which has set a goal to reduce community greenhouse gas emissions 35% below 2005 levels by 2035.

### PARTNERS TAKING ACTION

#### PERMAFROST THAW AND RIVER EROSION IN KUGLUK TERRITORIAL PARK

The Government of Nunavut's Climate Change Secretariat and Nunavut Parks and Special Places, with Laval University's Centre d'études nordiques and POLAR Knowledge Canada, are working together to address the concerns of permafrost thaw and river erosion in the Kugluk Territorial Park. This project is addressing concerns directly raised by community members from the Kugluk Community Joint Planning and Management Committee. The goal of the project is to improve access to the land for Nunavummiut, specifically individuals and families who travel to and through the Kugluk Territorial Park and to other hunting grounds. This is a multi-year project with funding support from Crown-Indigenous Relations and Northern Affairs Canada's [Climate Change Preparedness in the North Program](#).



Photo: © Government of Nunavut



# GREENING GOVERNMENT



## LONG-TERM GOAL

**The Government of Canada will transition to low-carbon, climate-resilient, and green operations**

## WHY IS THIS ISSUE IMPORTANT?

We are committed to becoming a leader on climate change. As we move forward on the Pan-Canadian Framework on Clean Growth and Climate Change, we will take action to ensure that we, the federal government, are doing our part and contributing to the broader economy-wide plan.

We have a large real property portfolio that uses a significant amount of energy. We also spend billions each year on goods and services in order to serve Canadians. Our large footprint means we have an opportunity to support the transition to a low-carbon economy, stimulate the clean tech sector, contribute to Canada's international climate change commitments, and achieve cost savings.

## THE GREENING GOVERNMENT STRATEGY

Introduced in 2017, the [Greening Government Strategy](#) sets a target to reduce greenhouse gas emissions from federal operations by 40% by 2030 (with an aspiration to achieve this target by 2025) and by 80% by 2050 relative to 2005 levels (with an aspiration to be carbon neutral). The Greening Government Strategy outlines specific measures to achieve this target and also outlines a broader scope for our greening efforts, including actions on adapting to climate change, transitioning to clean energy, and integrating greening across government procurement.

Making our real property low-carbon, climate-resilient, and green is integral to achieving our long-term target. Real property constitutes 89% of our targeted emissions and is linked to many other commitments in the Greening Government Strategy. It also accounts for nearly 40% of our procurement. By requiring that new buildings be net-zero carbon, all major retrofits prioritize low-carbon approaches, and all buildings use 100% clean electricity by 2025, we are greening our procurement, lowering our emissions and encouraging the transition to the clean economy. We're also taking action to green our office leases in buildings where the government is the major tenant.

## THE GREENING GOVERNMENT FUND

In recognition of the significant greenhouse gas emissions that result from air travel, starting in 2019–2020 departments and agencies that generate greenhouse gas emissions in excess of 1 kiloton per year from air travel will contribute annually to the [Greening Government Fund](#). This fund will support projects that allow departments to explore innovative approaches to reducing greenhouse gas emissions.

## MEDIUM-TERM TARGETS

The federal government leads by example through operations that are low-carbon, resilient and green.

### Real property and fleet

- ♦ Reduce greenhouse gas emissions from federal government facilities and fleets by 40% by 2030 (with an aspiration to achieve this target by 2025) and 80% below 2005 levels by 2050 (with an aspiration to be carbon neutral)
- ♦ Divert at least 75% (by weight) of non-hazardous operational waste from landfills by 2030
- ♦ Divert at least 75% (by weight) of plastic waste from landfills by 2030
- ♦ Divert at least 90% (by weight) of all construction and demolition waste from landfills (striving to achieve 100% by 2030)
- ♦ By 2030, 75% of domestic office lease transactions must be carbon neutral in situations where the federal government represents 75% or greater of the occupied space (square metres), market conditions permit and a competitive environment exists
- ♦ Our administrative fleet will be comprised of at least 80% zero-emission vehicles by 2030

## Adaptation to climate change

- ♦ By 2022, departments have developed measures to reduce climate change risks to assets, services and operations

### Procurement

- ♦ Use 100% clean electricity by 2025

#### **NATIONAL SAFETY AND SECURITY GREENHOUSE GAS EMISSIONS FROM GOVERNMENT OPERATIONS**

**Consistent with practices in other jurisdictions, some greenhouse gas emissions are excluded from the Government of Canada's greenhouse gas emissions reduction target for safety and security reasons. Examples are emissions from military, Coast Guard or Royal Canadian Mounted Police operations. These national safety and security related emissions will be tracked and publicly disclosed. Alternative energy options will be examined to potentially reduce emissions through new technologies, operational efficiencies and other innovative processes.**

## SHORT-TERM MILESTONES

### Real property

- ♦ Departments that have the highest greenhouse gas emissions will undertake a strategic evaluation of their real property portfolios to determine the most cost-effective pathway to achieve low-carbon operations
- ♦ All new federal buildings (including build-to-lease and public-private partnerships), starting at the latest in 2022, should be constructed to be net-zero carbon unless a lifecycle cost benefit analysis indicates net-zero carbon ready construction
- ♦ All new domestic office leases and lease renewals awarded after April 1, 2025, where the federal government is the majority tenant, market conditions permit and a competitive environment exists, preference will be given to buildings with the highest available EnergySTAR Portfolio Manager score
- ♦ We will track and disclose our potable water consumption and waste diversion rates by 2022

### Mobility and fleet

- ♦ 75% of new light-duty unmodified administrative fleet vehicle purchases will be zero-emission vehicles or hybrids
- ♦ All new executive vehicle purchases will be zero-emission vehicles or hybrids
- ♦ Departments will develop a strategic approach and take actions to decarbonize their fleets (including on-road, air, and marine)

## Adaptation to climate change

- ♦ By 2021, departments will take action to understand the wide range of climate change impacts that could potentially affect federal assets, services and operations across the country
- ♦ All major real property projects will integrate climate change adaptation into the design, construction and operation aspects

### Procurement

- ♦ Departments will include criteria that address carbon reduction, sustainable plastics and broader environmental benefits into procurements for goods and services that have a high environmental impact
- ♦ Eliminate the unnecessary use of single-use plastics in government operations, events and meetings
- ♦ When procuring products that contain plastics, promote the procurement of sustainable plastic products and the reduction of associated plastic packaging waste

## RESPONSIBLE MINISTERS/KEY DEPARTMENTS AND AGENCIES

All ministers/All departments and agencies

## CANADA'S STARTING POINT

- ♦ To track our progress on achieving low-carbon government, we measure greenhouse gas emissions from our operations. The baseline year for this measure is 2005–2006 when emissions from our operations totaled 1637 kilotonnes carbon dioxide equivalent. As of 2017–2018, departments and agencies have reduced emissions from their buildings and fleets by 32% relative to 2005–2006.
- ♦ All departments are required to reduce their emissions. However, most government emissions result from buildings and fleets. Therefore, only departments that own real property or fleets over 50 vehicles are required to report on their scope 1 and scope 2 emissions from those sources. Scope 1 emissions are those produced directly by sources owned or controlled by departments, such as vehicle fleets, and scope 2 emissions are those generated indirectly from the consumption of purchased energy, such as the electricity used in buildings.



## OUR ACTION PLAN

### KEY PRIORITIES

Under the Greening Government Strategy, we commit to:

- low-carbon, sustainable, and climate-resilient real property
- low-carbon mobility and fleet
- climate-resilient assets, services, and operations
- green goods and services

### ACTIONS ON PLASTIC WASTE IN FEDERAL OPERATIONS

Plastics play a major role in our economy and daily lives. However, plastic pollution is a growing problem in Canada and around the world. Canada has committed to global leadership in government operations that are low-carbon, resilient and green. We are taking [practical steps](#), consistent with the waste management elements of the Greening Government Strategy and the Policy on Green Procurement to better manage the use and disposal of plastics in our operations by increasing the diversion rate of plastic waste, reducing our unnecessary use of single-use plastics and procuring more sustainable plastics products.

## CONTRIBUTING ACTIONS

### Real property

- ♦ All new buildings and major building retrofits will prioritize low-carbon investments based on integrated design principles, and life-cycle and total-cost-of-ownership assessments which incorporate shadow carbon pricing
- ♦ Minimize embodied carbon and the use of harmful materials in construction and renovation
- ♦ Departments will adopt and deploy clean technologies and implement procedures to manage building operations and take advantage of programs to improve the environmental performance of their buildings
- ♦ In all new domestic office leases and lease renewals for space more than 500 square metres, landlords must report building energy and water usage and waste generated using EnergySTAR Portfolio Manager

### Mobility and fleet

- ♦ Fleet management will be optimized including by applying telematics to collect and analyze vehicle usage data on vehicles scheduled to be replaced
- ♦ The potential use of alternative energy options in national safety and security-related fleet operations will be examined

### Adaptation to climate change

- ♦ Increase training and support on assessing climate change impacts, undertaking climate change risk assessments and developing adaptation actions to public service employees, and facilitate sharing of best practices and lessons learned
- ♦ By 2021, adopt climate-resilient building codes being developed by National Research Council Canada

### Procurement

- ♦ Departments will use environmental criteria to reduce the environmental impact and ensure best value in government procurement decisions
- ♦ Departments will adopt clean technology and undertake clean technology demonstration projects
- ♦ Support for green procurement will be strengthened, including guidance, tools and training for public service employees

### Performance measurement

- ♦ Publicly disclose detailed environmental performance information on government operations—in particular, a complete inventory of federal greenhouse gas emissions and energy use—on the [Greening Government website](#) each year.

## TAKE ACTION!

As part of our greening strategy, we are focusing on the well-being of our employees by creating sustainable workplaces and mobilizing employees on greening government.

Green your own workplace by:

- using low-carbon forms of transportation to reduce emissions from commuting such as biking, walking, carpooling or public transit
- making use of video and teleconference services
- turning off computers and other equipment at the end of the work day
- using environmentally friendly office products, such as 100% recycled paper and refillable cartridges
- participating in employee challenges and activities such as Bike-to-Work Month, commuter challenges, shoreline clean-ups, zero-waste lunches, and the Goodbye Plastic Waste pledge
- establishing or joining a work green team to share ideas and amplify action



## CONNECTIONS WITH OTHER FSDS AREAS



Reducing greenhouse gas emissions from our own operations and making our buildings and operations more resilient support FSDS targets related to climate action, clean growth and clean energy.

### CANADA IN THE WORLD

Doing our part on climate change supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 7, Affordable and Clean Energy; SDG 9, Industry, Innovation and Infrastructure; SDG 11, Sustainable Cities and Communities; SDG 12, Responsible Consumption and Production; and SDG 13, Climate Action. It also supports specific SDG targets, as well as other international agreements and initiatives.

For details on how this goal supports international action, see Annex 3.

### OUR PARTNERS

We work with provincial, territorial and municipal governments to further joint greening objectives. We also partner with Indigenous communities to implement initiatives such as the purchase of clean electricity.

Canadian companies are also important partners—their research and development into clean and innovative technologies will help us to reduce our emissions.

### PARTNERS TAKING ACTION CANADIAN COUNCIL OF MINISTERS OF THE ENVIRONMENT

[Lights on the Path: A Compendium of Best and Promising Practices for Reducing Greenhouse Gas Emissions and Building Resilience in Government Operation](#) was issued under the Canadian Council of Ministers of the Environment and overseen by the Pan-Canadian federal-provincial-territorial Community of Practice for Climate Leadership that is co-chaired by the Centre for Greening Government and the Province of British Columbia.

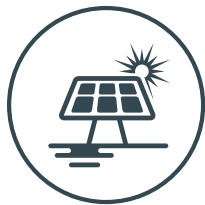
The compendium is intended as a resource for governments in their efforts to reduce greenhouse gas emissions from their own operations, scale up efforts to transition to highly efficient buildings and zero-emission fleets, and implement new approaches to procurement that support Canadian businesses, demonstrate new technologies and practices, and create jobs.

### PARTNERS TAKING ACTION CANADA GREEN BUILDING COUNCIL

[The Canada Green Building Council](#) partnered with the Government of Canada to identify the incremental cost, if any, of building net zero carbon buildings in various jurisdictions across Canada. The study demonstrated in most cases that there was no incremental cost over the lifecycle of the building of constructing various building types such as offices, warehouses and residential towers to be net-zero carbon.



# CLEAN GROWTH



## LONG-TERM GOAL

**A growing clean technology industry in Canada contributes to clean growth and the transition to a low-carbon economy**

### WHY IS THIS ISSUE IMPORTANT?

We know that a clean and healthy environment and a strong economy must go hand in hand in the modern world. We're taking action to support clean growth and transition to a more resource-efficient, lower-pollution, low-carbon economy.

Around the world, demand is increasing for technologies that reduce greenhouse gas emissions, increase resilience to climate change, and improve the quality of air and water. The global clean technology market is expected to exceed \$2.5 trillion by 2022 and continue to grow, with the Global Commission on the Economy and Climate estimating that by 2030, the clean economy will grow to \$26 trillion and create 65 million jobs worldwide. Canada's clean technology companies are well positioned to compete and win in this large and growing global market.

When it comes to clean technology, Canada has the opportunity to be a true global leader. By investing in clean technology innovation, we can generate economic growth while helping to meet our climate change goals. We recognize the potential in the transition to clean growth and are taking action to boost Canada's clean technology activity. By developing and adopting clean technologies, Canadian companies are creating opportunities to become globally competitive while reducing impacts on climate, water, land and air.

### MEDIUM-TERM TARGET

- ◆ Implement our [Mission Innovation](#) pledge to double federal government investments in clean energy research, development and demonstration from 2015 levels of \$387 million to \$775 million by 2020
- ◆ Increase the value of Canada's [clean technology exports](#) to \$15.6 billion by 2025

### SHORT-TERM MILESTONES

- ◆ By 2020, under the Clean Growth Program, implement over 40 industry-led research, development and demonstration projects in energy, mining and forestry sectors that will advance emerging clean technologies towards commercial readiness

- ◆ Between 2019 and 2022 CanmetEnergy and CanmetMaterial are engaging in 4 mission-driven research programs focused on advancing solutions to concrete problems in clean energy production and use
- ◆ By 2023, the Energy Innovation Program will demonstrate up to 30 innovative clean energy technologies and solutions in areas such as oil and gas, renewable energy, and electric vehicle infrastructure
- ◆ Work with all levels of government, Indigenous communities, industry, and other stakeholders to develop an action plan to implement the Canada-wide strategy on zero plastic waste

### CANADA-WIDE STRATEGY ON ZERO PLASTIC WASTE

**In Canada, approximately 3 million tonnes of plastic waste are sent to landfills every year. That is why provinces, territories and the Government of Canada propose to move toward a circular economy for plastics by pursuing zero plastic waste. A circular approach to plastic waste aims to keep products and materials in use as long as possible, maximize their value, and close the loop on waste by reusing, repairing, remanufacturing and recycling, to the extent possible.**

**To this end, in November 2018 federal, provincial and territorial ministers approved in principle a [Canada-wide strategy on zero plastic waste](#) and committed to develop an Action Plan to implement the strategy.**

**The strategy outlines a vision to keep plastics in the economy, and out of landfills and the environment, and identifies 10 results areas that will drive the development of future actions:**

- ◆ product design
- ◆ single-use plastics
- ◆ collection systems
- ◆ markets
- ◆ recycling capacity
- ◆ consumer awareness
- ◆ aquatic activities
- ◆ research and monitoring
- ◆ clean-up
- ◆ global action

## RESPONSIBLE MINISTERS/ KEY DEPARTMENTS AND AGENCIES

Minister of Innovation, Science and Economic Development; Minister of Natural Resources/ Atlantic Canada Opportunities Agency; Canada Economic Development for Quebec Regions; Canadian Northern Economic Development Agency; Employment and Social Development Canada; Environment and Climate Change Canada; Federal Economic Development Agency for Southern Ontario; Federal Economic Development Initiative for Northern Ontario; Global Affairs Canada; Innovation, Science and Economic Development Canada; National Research Council Canada; Natural Resources Canada; Standards Council of Canada; Statistics Canada; Sustainable Development Technology Canada; Western Economic Diversification Canada

## CANADA'S STARTING POINT

To measure the growth of Canada's clean technology sector, we track the contribution of clean technology to GDP, as well as the number of jobs related to clean technology. According to the Environmental and Clean Technology Products Economic Account, in 2017, environmental and clean technology goods and services accounted for 1.4% (\$28.4 billion) of Canada's GDP. This sector also accounted for approximately 183 000 jobs (2017) or 1% of jobs in Canada. Clean technology exports totaled \$9 billion in 2017, an increase of \$900 million (11%) from 2016.

### THE 10TH CLEAN ENERGY AND 4TH MISSION INNOVATION (CEM10/MI-4) MINISTERIALS

In May 2019, Canada hosted the Clean Energy and Mission Innovation ministerials in Vancouver, BC. The goal of CEM10/MI-4 is to accelerate the transition to a clean energy future by collaborating on the development and deployment of clean technologies and solutions. The event brought together ministers from over 25 countries, as well as leaders from industry and international organizations. Canada worked closely with the international community to deliver key outcomes that complement and leverage our domestic activities and priorities while demonstrating Canada's leadership on the world stage. Canada positioned itself as a global leader in inclusivity by highlighting the leadership of women, youth and Indigenous peoples. The Innovation Showcase, a 2-day trade show event, cultivated commercial networks, highlighted investment opportunities and showcased Canadian innovation.

## OUR ACTION PLAN

### KEY PRIORITIES

In support of our clean energy investment target and our Clean Growth goal, we will continue to bolster the ability of Canadian clean technology companies to develop, scale up, and access international markets by continuing to implement the Innovation and Skills Plan and the Pan-Canadian Framework on Clean Growth and Climate Change. This includes:

- investing \$2.3 billion between 2017 and 2022 to support companies and projects of all sizes, including:
  - \$1.4 billion to the Business Development Bank of Canada and Export Development Canada to increase access to capital to allow companies to scale into global competitors
  - \$400 million to Sustainable Development Technology Canada to support the development and demonstration of pre-commercial clean technologies
  - \$155 million to the Clean Growth Program, which funds industry-driven clean technology research, development and demonstration in Canada's energy, mining and forestry sectors
  - \$75 million for 5 Impact Canada clean technology challenges focused on unlocking breakthrough solutions to complex and persistent problems: Women in Clean Tech, The Sky's the Limit, Power Forward, Crush It! and the Generating New Opportunities: Indigenous Off-diesel Initiative
  - \$52.9 million per year to the Energy Innovation Program, which funds projects focused on significantly reducing greenhouse gas emissions in the areas of electricity, buildings, transportation and industry
- supporting innovative solutions to address plastic waste in areas such as food packaging, ghost fishing gear, and compostability of bioplastics through the Canadian Plastics Innovation Challenge launched in October 2018
- supporting the Clean Technology Data Strategy, the foundation for collecting and measuring the economic, environmental, and social impacts of clean technology in Canada
- implementing measures announced in the 2018 Fall Economic Statement and Budget 2019 to advance clean technology and clean growth in Canada, including:
  - \$50 million over the next 3 years to increase funds available to clean technology firms under the Venture Capital Catalyst Initiative (VCCI). This new stream of funding is in addition to the \$400 million already announced in Budget 2017 for the VCCI to help meet Canada's climate change goals and to help Canada's innovative clean technology firms bring their technologies to market
  - immediate expensing for clean technology to increase market adoption
  - the creation of a Centre for Regulatory Innovation to modernize the regulatory system and encourage innovation
- providing advice and support to Canadian companies through the [Clean Growth Hub](#), the federal government focal point for clean technology
- implementing national green infrastructure programs ([Smart Grid](#), [Electric Vehicle Infrastructure Demonstration Program](#), [Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative](#), [Energy Efficient Buildings](#), [Emerging Renewable Power](#), and [Clean Energy for Remote and Rural Communities](#)) which represent an \$820 million investment under Budget 2017

In support of our Clean Growth goal, we will work with provinces, territories and other partners to implement the Canada-wide strategy on zero plastic waste, including through actions in key areas such as addressing single-use and disposable plastics and increasing recycled content in plastic products.

In support of clean growth objectives, in line with our Clean Growth goal, we will work with territorial and Indigenous governments to advance the economic elements of the Arctic and Northern Policy Framework by developing a Pan-Territorial Growth Strategy to stimulate sustainable and diverse economic growth in Yukon, Northwest Territories and Nunavut.

## CONTRIBUTING ACTIONS

To accelerate innovation and foster the development, scale-up and commercialization of new technologies, we will:

### Invest in clean technologies

Support the development, demonstration, commercialization, deployment, adoption and export of technologies that reduce environmental impacts by implementing clean technology commitments in the Innovation and Skills Plan and the Pan-Canadian Framework on Clean Growth and Climate Change.

This work will leverage regional strengths and help to improve competitiveness and environmental performance in sectors such as energy, mining, building, and waste management.

### Collaborate with stakeholders to support the growth of clean technology in Canada

Work with provinces, territories, Indigenous communities, business, industry, technology producers, and academia to support the growth of clean technology, including by:

- ♦ making strategic investments in clean technologies, including those that reduce greenhouse gas emissions and improve air quality
- ♦ including clean technology solutions in a strategy to reduce plastic waste in Canada
- ♦ supporting technology development and demonstration through clean technology programs, and promoting the adoption of clean technologies
- ♦ collaborating on strategies to advance socio-economic development through clean energy projects in rural and remote communities and reduce dependence on fossil fuel for heat and electricity
- ♦ improving and modernizing the regulatory system to enable investment and innovation

### Promote Canadian firms as world leaders in clean technologies

Collaborate with provincial and territorial governments to support Canadian clean technology.

Continue to promote Canadian companies through the new [International Business Development Strategy for Clean Technology](#).

## GENERATING NEW OPPORTUNITIES: INDIGENOUS OFF-DIESEL INITIATIVE

Developed by Natural Resources Canada in collaboration with Indigenous Clean Energy Social Enterprise and the Pembina Institute, the Indigenous Off-diesel Initiative will help communities move away from using diesel by supporting the development of community-led cleaner energy projects.

An all-Indigenous panel of jurors will select up to 15 Energy Champions who will receive specialized clean energy training. Energy Champions and their communities will be eligible to receive up to \$1.3 million over a 36-month period as they achieve key milestones including a comprehensive community energy plan, additional training and mentoring, and project design and development.

Leading communities will then be pre-qualified to receive additional funding (up to \$9 million total) from the Clean Energy for Rural and Remote Communities program to continue implementing the energy plan.

### Collaborate with international partners in the transition to clean energy, low-carbon future

Demonstrate international leadership to support the growth of clean technology—for example, by continuing to meet Canada's Mission Innovation commitments.

Actions through Mission Innovation include, for example:

- ♦ collaborating with other countries to accelerate global clean energy innovation by participating in all [8 innovation challenges](#), including co-leading the [Sustainable Biofuels Challenge](#) and the [Clean Energy Materials Challenge](#)
- ♦ encouraging greater levels of private-sector investments, while doubling federal investments in clean energy research and development

### Develop our understanding of the clean technology landscape in Canada

Develop our understanding of the impacts and benefits of clean technology on the Canadian economy through the [Clean Technology Data Strategy](#), which provides the foundation for measuring the economic, environmental and social impacts of clean technology in Canada and includes action in 3 areas:

- ♦ producing macro economic indicators on the clean technology economy
- ♦ leveraging firm-level data to establish a common set of indicators across industries to allow for better understanding of challenges and opportunities faced by clean technology companies
- ♦ leveraging administrative data to better measure the efficiency and improve government programs to meet clean technology objectives

### Support voluntary action to reduce environmental impacts

Encourage businesses, provinces and territories, and Canadians to take action to reduce environmental impacts such as greenhouse gas and air pollutant emissions—for example, by supporting and providing accreditation and verification for clean technology solutions to reduce greenhouse gas and air pollutant emissions.

### Support skills and training in clean technology

Help re-skill existing workers and create opportunities for youth in highly-skilled trades and science, technology, engineering and mathematics. This includes:

- ♦ implementing the [Science Horizons Youth Internship Program](#) (part of the Youth Employment Strategy) which supports green jobs for youth by providing wage subsidies to eligible employers to hire interns in environmental and clean technology sectors
- ♦ supporting capacity building, training, education and skills development in various natural resources fields to ensure Indigenous communities have the necessary human capital to be successful long-term, through programs such as the Indigenous Forestry Initiative, Clean Energy for Rural and Remote Communities Program and the Impact Canada Indigenous Off-Diesel Initiative

Adopt fair and flexible approaches that help Canadian workers and businesses realize opportunities in the clean-growth economy. This includes responding to recommendations of the [Task Force on Just Transition for Canadian Coal Power Workers and Communities](#) by:

- ♦ creating worker transition centres that will offer skills development incentives and economic and community diversification activities in western and eastern Canada
- ♦ working with those affected to explore new ways to protect wages and pensions
- ♦ creating a dedicated infrastructure fund to support priority projects and economic diversification in impacted communities

## CONNECTIONS WITH OTHER FSDS AREAS



Investing in clean technology and innovation supports economic growth, as well as FSDS targets related to climate action, clean energy, greening government, sustainable food, and building safe and healthy communities:

- ♦ clean technology can reduce greenhouse gas emissions and increase climate resilience
- ♦ investing in clean energy technology will make Canada's energy system more sustainable
- ♦ we are helping to support the transition to a low-carbon economy by adopting clean technology in our own operations and undertaking clean technology demonstration projects
- ♦ investing in clean technology reduces reliance on fossil-fuel generated electricity and heat in rural and remote areas and supports economic development and healthy and sustainable communities
- ♦ investing in clean technology is helping sectors such as forestry, fisheries, mining, energy, agriculture and manufacturing, and their related supply chains, become more sustainable and competitive

## CANADA IN THE WORLD

Investing in clean technology and innovation supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 9, Industry, Innovation and Infrastructure; SDG 12, Responsible Consumption and Production; SDG 13, Climate Action; and SDG 17, Partnerships for the Goals. It also supports specific SDG targets, as well as other international agreements and initiatives.

For details on how this goal supports international action, see Annex 3.

## OUR PARTNERS

Canada's clean technology producers and users, academic institutions, Indigenous organizations, provinces and territories, and municipalities all play a role in advancing clean technology and clean jobs. Canadian companies are taking the lead in developing and adopting technologies that contribute to a low-carbon economy. Meanwhile, provinces, territories and others are working to further encourage technology research, development and adoption. For example:

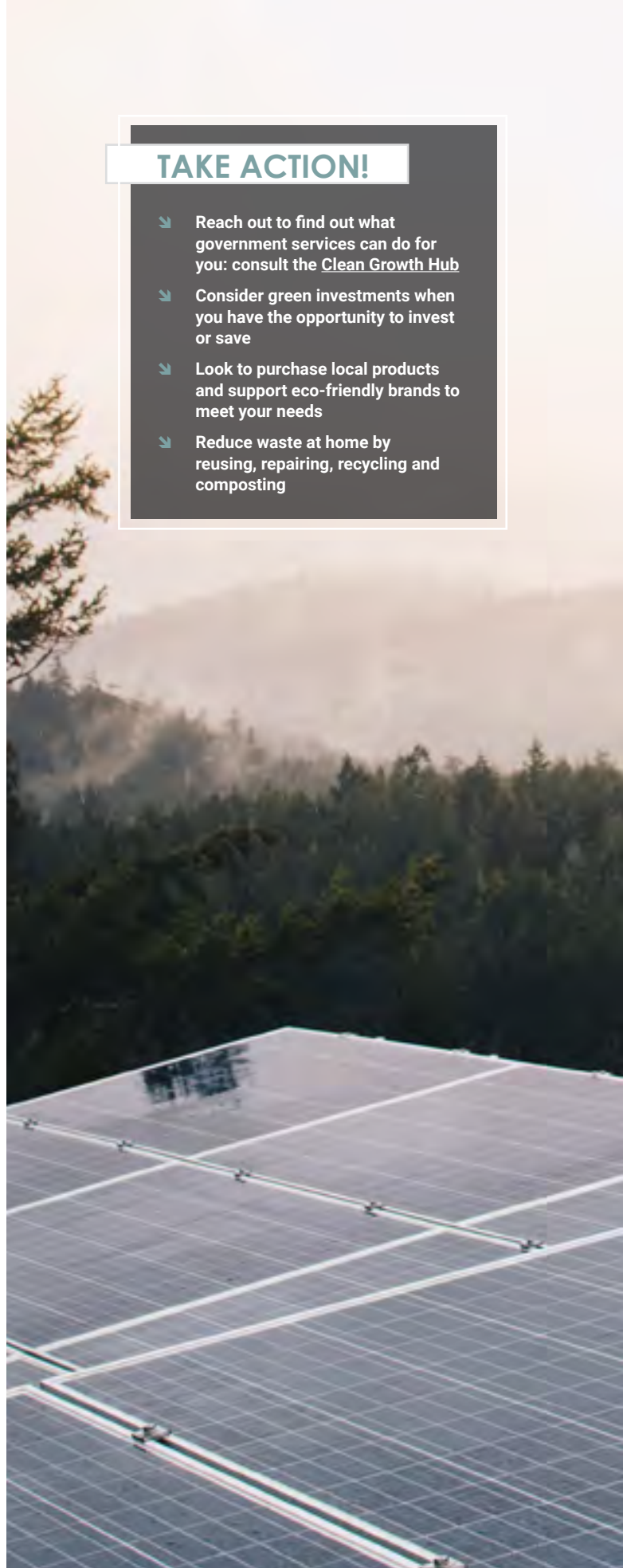
- ◆ British Columbia's [#BCTECH Strategy](#) includes measures to increase adoption and exports of clean technologies
- ◆ Alberta's [AB Innovates](#) and [Emission Reduction Alberta](#) that invest in research, innovation, and accelerates the development of clean technologies aimed at improving the environment
- ◆ Ontario supports the [Ontario Centres of Excellence](#), a not-for-profit program that helps to commercialize academic research and invests in early-stage projects with commercial potential
- ◆ Quebec's [Technoclimat Program](#) encourages developing new technologies and innovative processes related to energy efficiency and emerging energy sources
- ◆ Nova Scotia's [Innovacorp](#) is the province's early stage venture capital organization. It provides early-stage investment, as well as hands-on business advisory services
- ◆ [Cold Climate Innovation](#) at the Yukon Research Centre provides seed money to individuals and companies to develop prototypes that can be tested and moved towards commercialization
- ◆ Clusters of business incubators and accelerators like Toronto's [MaRS Discovery District](#) and the [Digital Media Zone](#) at Ryerson University connect investors, educators, researchers, social scientists, entrepreneurs and business experts

Provinces and territories are also investing in their workforce so that more Canadians can participate in the clean growth economy. For example:

- ◆ Alberta's Coal Workforce Transition Program and Coal Community Transition Fund support workers and communities affected by the phase-out of coal-fired electricity generation transition toward employment in new, emerging sectors
- ◆ Ontario's Second Career program assists workers in developing the necessary skills for in-demand jobs

## TAKE ACTION!

- Reach out to find out what government services can do for you: consult the [Clean Growth Hub](#)
- Consider green investments when you have the opportunity to invest or save
- Look to purchase local products and support eco-friendly brands to meet your needs
- Reduce waste at home by reusing, repairing, recycling and composting



### PARTNERS TAKING ACTION ENHANCED MODIFIED VAPOUR EXTRACTION

[MEG Energy Corp](#) is using an enhanced vapour extraction technology to reduce greenhouse gas emissions from oil sands extraction, reduce water use, and increase efficiency. Applying the technology is expected to result in cost savings while minimizing environmental impacts to land, air and water. This project was developed with support from [Natural Resources Canada](#).



### PARTNERS TAKING ACTION CARBON ENGINEERING: AIR TO FUEL

Since starting in 2015, British Columbia based [Carbon Engineering](#) has been able to capture 1 tonne of carbon dioxide from the air at its pilot Direct Air Capture plant in Squamish, British Columbia. They are pioneering a scalable technology to capture carbon dioxide from the air and combine it with hydrogen atoms released from other clean energy sources to turn it into liquid fuels for transportation. The clean-burning synthetic fuels will contribute to the low-carbon economy and reduce emissions. This project was developed with support from [Natural Resources Canada](#).

### PARTNERS TAKING ACTION ALBERTA CARBON CONVERSION TECHNOLOGY CENTRE

Owned and operated by [InnoTech Alberta](#), the Alberta Carbon Conversion Technology Centre is working to advance technologies to turn carbon dioxide emissions into usable products such as building materials, alternative fuels and commercial goods. This work, supported by [Natural Resources Canada](#), will help reduce emissions while creating local jobs in the surrounding community.





# MODERN AND RESILIENT INFRASTRUCTURE



## LONG-TERM GOAL

**Modern, sustainable, and resilient infrastructure supports clean economic growth and social inclusion**

### WHY IS THIS ISSUE IMPORTANT?

Green infrastructure—including water and wastewater systems, clean energy, low-carbon transportation, climate-resilient infrastructure like flood mitigation systems, and structural or natural infrastructure to protect against a changing climate and reduce impacts of natural hazards within communities—protects the natural environment, supports healthy and resilient communities, drives economic growth, and improves our quality of life.

We need modern water and wastewater facilities to ensure that Canadians have clean water to drink and to protect our lakes, rivers and oceans from pollution. Clean energy infrastructure will help decrease greenhouse gas emissions and air pollution. Deployment of electric vehicle chargers, natural gas and hydrogen refuelling stations will help lower barriers to using low-carbon transportation options. And as the impacts of climate change continue to manifest, climate-resilient infrastructure that protects Canadians will become increasingly important to sustain economic, environmental and social well-being.

In addition to green infrastructure, other infrastructure investments—for example, to provide affordable housing and upgrade public transit—also contribute to environmental sustainability, economic prosperity and improved quality of life.

### MEDIUM-TERM TARGET

- ♦ By the end of the 2027-2028 fiscal year, invest \$26.9 billion in funding for green infrastructure initiatives that reduce greenhouse gas emissions and improve climate resilience and environment quality

### SHORT-TERM MILESTONES

- ♦ From 2019 to 2022, 6 new and/or revised bi-national (where possible) codes and standards for alternative fuels, electric vehicles or infrastructure will be completed annually
- ♦ By 2022, over 30 standardization solutions will be delivered under the Standards Council of Canada's Standards to Support Resilience in Infrastructure program, to boost infrastructure resilience and create stronger communities for Canadians
- ♦ By 2022, 8 to 15 new wood-based buildings and infrastructure projects will be demonstrated under the Green Construction through Wood program, encouraging the increased use of wood products in non-traditional building construction to reduce greenhouse gas emissions and spur economic growth

### RESPONSIBLE MINISTER/KEY DEPARTMENTS AND AGENCIES

Minister of Infrastructure and Communities/  
Indigenous Services Canada; Infrastructure Canada;  
Natural Resources Canada; National Research Council;  
Standards Council of Canada

### CANADA'S STARTING POINT

In partnership with Statistics Canada, Infrastructure Canada released the first round of data from Canada's Core Public Infrastructure Survey between August and December 2018. These results, from reference year 2016, establish a comprehensive baseline of infrastructure data. The survey provides Canadians with information on asset management practices as well as the stock, condition, and performance of 9 different core public infrastructure asset classes owned or leased by provincial, territorial, regional and municipal governments. The next round of data will be collected in fall 2019 for reference year 2018.

## OUR ACTION PLAN

### KEY PRIORITIES

- In support of our green infrastructure target, we will continue to implement [our long-term infrastructure plan](#), which focuses on investments in projects that will help build our economy for the future.
- In support of our green infrastructure target, Budget 2017 provided \$9.2 billion over 11 years through the Investing in Canada Infrastructure Program in green infrastructure, including clean energy generation, transmission and storage initiatives, structural or natural infrastructure projects that are better adapted to the impacts of climate change, as well as projects that increase access to drinking water.
- In support of our green infrastructure target, we will work with provinces and territories to target a 10-megatonne reduction in greenhouse gas emissions in 2030 through investments made within integrated bilateral agreements.
- In support of our green infrastructure target, we will invest \$40 million over 4 years, starting in 2018–2019, through the [Green Construction through Wood program](#) to update national building codes, increase education, and demonstrate through innovative projects the capacity for using wood in non-traditional construction projects as a sustainable means of growing our built environment.
- In support of our modern and resilient infrastructure goal, Budget 2019 proposed to provide \$130 million over 5 years to deploy new recharging and refuelling stations in workplaces, public parking spots, commercial and multi-unit residential buildings, and remote locations.
- In support of our modern and resilient infrastructure goal, Budget 2019 proposed to provide \$151.23 million over 5 years to improve emergency management in Canada. This investment will improve Canada's ability to predict and respond to threats and will help to assess the condition and resilience of critical infrastructure in the aftermath of a natural disaster.
- In support of our modern and resilient infrastructure goal, Budget 2019 proposed to provide \$211 million to support increased resiliency and emergency management on-reserve and \$48 million to renew funding for infrastructure projects on-reserve that will protect communities from climate related hazards, recognizing that First Nations communities face disproportionate health and safety risks from emergencies and natural disasters.

### CONTRIBUTING ACTIONS

In the short term, under our long-term infrastructure plan, we will:

#### Work with partners on green infrastructure

Advance collaboration with provinces, territories, municipalities, Indigenous peoples and others to improve water and wastewater infrastructure, as well as support actions to reduce greenhouse gas emissions, improve air quality and strengthen climate resilience, including by:

- ♦ ensuring that communities have more reliable water and wastewater systems so that both drinking water and effluent meet legislated standards—for example, by providing funding through integrated bilateral agreements with provinces and territories
- ♦ requiring that proponents for certain infrastructure projects assess how their projects will contribute to or reduce carbon pollution and to consider climate change risks in the location, design, and planned operation of projects
- ♦ helping municipalities adapt to the impacts of climate change, reduce greenhouse gas emissions and integrate climate change considerations in their asset management practices—for example, by providing funding, training and resources through the [Municipalities for Climate Innovation Program](#)
- ♦ improving the capacity, quality, safety and accessibility of public transit infrastructure throughout Canada to support the transition to a low-carbon economy and reduce air pollution and greenhouse gas emissions
- ♦ demonstrating innovative wood-based building products and systems that support greenhouse gas emissions reductions
- ♦ providing innovative financing strategies for projects that reduce greenhouse gas emissions, deliver clean air and safe water, and promote renewable power

## CANADA'S CLIMATE LENS FOR INFRASTRUCTURE INVESTMENT

As of 2018, a climate lens will be applied to select programs under [our long-term infrastructure plan](#). The climate lens supports proponents in designing better projects by assessing opportunities to reduce carbon pollution and identifying when they should be adapted to better withstand severe weather, floods and other possible natural disasters linked to climate change.

The climate lens encourages improved choices by project planners consistent with shared objectives under the Pan-Canadian Framework. It will apply to projects with eligible costs of a value greater than \$10 million under the [Investing in Canada Infrastructure Program](#), all projects under the [Disaster Mitigation and Adaptation Fund](#), and select finalists of the [Smart Cities Challenge](#).

### Support low-carbon, resilient infrastructure

As part of implementing the Pan-Canadian Framework, continue to support projects in various sectors that help reduce greenhouse gas emissions and build climate resilience. This includes:

- ♦ ensuring that from 2016 to 2024 a coast-to-coast network of more than 1000 electric vehicle fast chargers along Canada's highways, 22 natural gas stations along key freight corridors, and 15 hydrogen stations in metropolitan areas will be built under the [Electric Vehicle and Alternative Fuel Infrastructure Initiative](#)
- ♦ implementing the Standards to Support Resilience in Infrastructure Program, which supports the development of standardization guidance on weather data, climate information and climate change projections
- ♦ updating existing standards to ensure infrastructure across Canada is climate-ready and investing in new standards that support northern infrastructure
- ♦ making buildings more energy efficient by developing with provinces and territories model building codes by 2022 and labelling /disclosure as early as 2019 through Build Smart: Canada's Buildings Strategy with the goal that provinces and territories adopt increasingly stringent codes beginning in 2020, and reaching net-zero energy ready construction by 2030

## CONNECTIONS WITH OTHER FSDS AREAS



Investing in infrastructure supports FSDS targets related to clean energy, climate action, clean drinking water, and building safe and healthy communities:

- ♦ investing in green infrastructure can reduce greenhouse gas emissions, reduce air pollution, and protect communities from climate impacts
- ♦ investing in wastewater infrastructure helps prevent water pollution and protect sources of drinking water
- ♦ investing in lower-carbon transportation infrastructure supports the use of clean energy

## CANADA IN THE WORLD

Investing in infrastructure supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 6, Clean Water and Sanitation; SDG 7, Affordable and Clean Energy; SDG 9, Industry, Innovation and Infrastructure; and SDG 13, Climate action. It also supports a specific SDG target, as well as other international agreements and initiatives. For details on how this goal supports international action, see Annex 3.

## OUR PARTNERS

Provinces, municipalities, territories, and Indigenous peoples own most of Canada's public infrastructure and are essential partners in infrastructure investment. We are committed to working collaboratively with our partners on their infrastructure priorities.

The vast majority of core public infrastructure (such as water and wastewater systems, roads and bridges) are owned by the provinces and territories (38.1%) and municipalities (59.8%). Working with other orders of government and aligning priorities and programs is key to implementing several programs under our long-term infrastructure plan. Bilateral agreements with provinces and territories in particular represent a key delivery mechanism, and these partnerships allow us to leverage and thus significantly increase the reach of infrastructure funding.

Provinces and territories across the country are investing in green infrastructure to reduce greenhouse gas emissions or to adapt to emerging climate change impacts. For example, Saskatchewan is making significant investments in reducing electricity emissions through the development and installation of the world's first major post-combustion carbon capture use and storage facility. Carbon captured using this technology can be permanently sequestered underground, whether in deep saline formations or by using it to enhance oil recovery.

Canadian provinces, territories and municipalities are also investing in green infrastructure to enhance resilience to floods, a major risk for many Canadians, while also improving environmental outcomes. For example, the Don Mouth Naturalization and Port Lands Flood Protection Project in Toronto is transforming the mouth of the Don River to create a more naturalized river outlet, while simultaneously providing critical flood protection to 240 hectares of Toronto's eastern waterfront. Further, Toronto's Green Roof Strategy is creating incentives and making grants available for the development of green roofs to improve storm water management, mitigate heat island effects, reduce greenhouse gas emissions and improve air quality.

Other governments and the private sector are taking action to support the development of a coast-to-coast fast-charging network for electric vehicles. For example, with funding provided through the Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative, BC Hydro has committed to build 23 electric vehicle fast chargers in BC, while Hydro-Quebec is building 100 fast chargers across Quebec. Meanwhile, Petro-Canada has announced that it will install more than 50 fast charging stations along the Trans Canada highway from Nova Scotia to BC.

## TAKE ACTION!

- Choose low-carbon transportation options like electric or alternative fuel vehicles
- Look for opportunities to walk, bike, or take public transit instead of using a car
- Support municipal green infrastructure projects and initiatives
- Help take care of the infrastructure in your area—for example, follow guidelines for proper disposal of fats, oil and grease which can clog pipes and damage wastewater infrastructure if put down the sink
- Protect drinking water sources by reducing pollution and participating in shoreline cleanups
- Make your voice heard—participate in town halls, round tables and surveys about municipal infrastructure and public transit system improvements
- Use high-efficiency lighting and equipment
- Take projected climate change impacts into account when considering new development
- Help protect natural infrastructure, such as wetlands and watersheds, by cleaning up litter and disposing of waste properly

### **PARTNERS TAKING ACTION**

#### **INFRASTRUCTURE INVESTMENT IN NEW BRUNSWICK**

The governments of Canada and New Brunswick, along with the Village of New Maryland and Oromocto First Nation, have announced over \$1.1 million in funding for 2 infrastructure projects that will benefit the people living in New Maryland and Oromocto First Nation:

- in New Maryland, the funding will be used to extend a water main and storm sewer as well as rehabilitate an existing sanitary sewer
- the second project involves the installation of solar thermal heating units on band owned buildings throughout the Oromocto First Nation community

Once completed, the 2 projects will help ensure New Maryland and Oromocto First Nation remain vibrant and healthy communities where people want to live, work and play.

### **PARTNERS TAKING ACTION**

#### **ELECTRIC VEHICLE CHARGING STATIONS**

The Region of Peel is working to mitigate the effects of climate change by introducing 10 new electric vehicle charging stations. Natural Resources Canada provided funding toward the installation of 2 DC Level 3 Fast charging stations. These charging stations will encourage the use of electric vehicles, helping to reduce greenhouse gas emissions while building a cleaner community.

### **PARTNERS TAKING ACTION**

#### **MUNICIPAL NATURAL ASSETS INITIATIVE**

The Municipal Natural Assets Initiative aims to equip local governments with the tools to identify and account for natural assets at the community level, as well as best practice guidelines for working with community stakeholders to increase natural asset management. The initiative has completed 5 pilot projects in Canadian communities with an additional 12 underway.

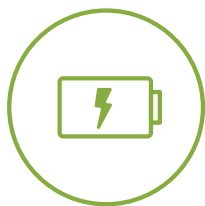
### **PARTNERS TAKING ACTION**

#### **UNIVERSITÉ LAVAL: A COMMUNITY COMMITTED TO SUSTAINABLE DEVELOPMENT**

Since formally incorporating sustainable development principles into its operations in 2007, Université Laval has been working to ensure that sustainable development values are integral in its operations. Among other actions, Université Laval is the first university in Canada to voluntarily become carbon-neutral through activities such as adopting energy efficient technologies and through offsetting initiatives such as the Montmorency Forest carbon sink. In addition, Université Laval has made education on sustainable development a priority. The University offers more than 383 courses that are linked to sustainability and requires all undergraduate students to learn the principles of sustainable development through, for example, seminars, courses, and lectures.



# CLEAN ENERGY



## LONG-TERM GOAL

**All Canadians have access to affordable, reliable and sustainable energy**

### WHY IS THIS ISSUE IMPORTANT?

Canada already has one of the world's cleanest electricity systems, and clean technology is bringing innovative energy solutions to the forefront. To continue making progress, we need to accelerate the development and adoption of renewable energy and other clean energy, and continue to reduce energy consumption through improved efficiencies. In addition to supporting the transition to a low-carbon economy, a cleaner energy system also provides benefits such as healthier homes, more resilient infrastructure and ecosystems and jobs for Canadians across the country.

To support the transition to a clean energy future, we will work with partners to generate cleaner power, use more renewable fuels and produce cleaner oil and gas. We will also work to help Indigenous and northern communities reduce their reliance on diesel for electricity and heat.

Increasing energy efficiency is also an important way to reduce greenhouse gas emissions while saving money and increasing competitiveness. Saving energy now reduces the need for additional generating capacity in the future. According to the International Energy Agency, energy efficiency measures and technology innovation have the potential to keep Canada's energy demand on a steady decline to 2050, despite rising economic activity. We will continue to support Canadians in making their homes and businesses more energy efficient through measures such as energy labelling of appliances and vehicles, EnerGuide home evaluations, and energy efficiency tools and standards for industry.

### MEDIUM-TERM TARGETS

- ◆ By 2030, 90% and in the long term, 100% of Canada's electricity is generated from renewable and non-emitting sources
- ◆ By 2030, 600 petajoules of total annual energy savings will be achieved as a result of adoption of energy efficiency codes, standards and practices from a baseline savings of 27.4 petajoules in 2017–2018

### SHORT-TERM MILESTONES

- ◆ Implement 5 national programs, an \$820 million investment under Budget 2017, that support the Pan-Canadian Framework on Clean Growth and Climate Change by reducing greenhouse emissions and helping to build a clean economy—for example:
  - ◆ the [Emerging Renewable Power Program](#) which aims to support 150 megawatts of electricity capacity by the end of 2022-2023
  - ◆ the [Clean Energy for Rural and Remote Communities](#) Program which aims to produce 40 megawatts of renewable energy capacity by 2025
- ◆ Expand support for implementation of energy management systems such as the ISO 50001 standard in buildings and industrial facilities
- ◆ Publish [net-zero energy ready](#) code requirements starting in 2020, with the goal that provinces and territories adopt a net-zero energy ready model building code by 2030 to enable new buildings to consume as little energy as possible

### REDUCING RELIANCE ON DIESEL IN RURAL AND REMOTE COMMUNITIES

Canada's remote communities rely on diesel fuel electricity and heat, which is costly and emits greenhouse gases. As part of our support for the Pan-Canadian Framework for Clean Growth and Climate Change, we are making investments to help rural and remote communities reduce their reliance on diesel and transition toward more secure, affordable and clean energy. This includes working directly with communities and project proponents through Natural Resources Canada's [Clean Energy for Rural and Remote Communities Program](#).

## RESPONSIBLE MINISTER/ KEY DEPARTMENTS AND AGENCIES

Minister of Natural Resources/Atlantic Canada Opportunities Agency; Crown-Indigenous Relations and Northern Affairs Canada; Department of Finance Canada; Environment and Climate Change Canada; Indigenous Services Canada; Natural Resources Canada; National Research Council Canada; Infrastructure Canada

## CANADA'S STARTING POINT

- ♦ To measure our progress on clean energy, we track the proportion of Canada's electricity generation that comes from renewable and non-emitting sources. In 2016, 66% of Canada's electricity came from renewable sources (including hydro, solar and wind) and 81% came from non-emitting sources (including both renewables and nuclear).
- ♦ To measure our progress on energy efficiency, we measure the difference between energy use with and without energy efficiency improvements and the corresponding greenhouse gas emissions avoided. From 1990 to 2016, energy efficiency in Canada improved 31.4%, which saved 2100 petajoules, or \$45 billion in energy costs, and avoided 112.1 megatonnes of greenhouse gas emissions in 2016.

## OUR ACTION PLAN

### KEY PRIORITIES

- In support of our clean power generation and energy efficiency targets, we will continue to work closely with provinces and territories, including through the Pan-Canadian Framework on Clean Growth and Climate Change, to:
  - increase energy efficiency, including by working with experts and other partners to drive efficiency in housing, building, communities, industry and transportation
  - use cleaner power, including by significantly expanding our clean electricity generating capacity, and by increasing the share of energy provided by electricity
  - use more renewable fuels in transportation, heating and cooling and industrial processes
  - produce cleaner oil and gas, including by supporting increased efficiency and new technologies to capture and store emissions
- In support of our energy efficiency target, Budget 2019 proposed to provide \$950 million to increase energy efficiency in residential, commercial, and multi-unit buildings. These investments will be delivered by the Federation of Canadian Municipalities through the Green Municipal Fund.
- In support of our Clean Energy goal, Budget 2019 proposed to provide \$15.2 million over 5 years, starting in 2019–2020, for a virtual Canadian Centre for Energy Information to improve the overall quality of energy information available to Canadians.
- In support of our Clean Energy goal, we will continue to play a leading role in international clean energy initiatives. For example, we will continue to work with the US and other international partners, bilaterally and through multilateral mechanisms such as the Clean Energy Ministerial and Mission Innovation.

## CANADA'S ENERGY FUTURE

Building on the largest national conversation about energy in Canada's history, the [Generation Energy Council's](#) June 2018 report articulated a vision of Canada's energy transition and outlined actions that Canadians could take over the next generation to build a low carbon future. It identified 4 foundational pathways that will drive the transition to a low-carbon future, including energy efficiency, clean electrification, cleaner fuels, and cleaner oil and gas.

Taking into account the Generation Energy Council's vision, Canada's energy future is being built on 4 principles:

- 1) Saving Energy
- 2) Powering Clean Communities
- 3) Using More Renewable Fuels
- 4) Powering the World

These principles are based on the foundations of partnering with provinces and territories, collaborating with Indigenous peoples, building the energy workforce of tomorrow and empowering Canadians' energy choices. More information can be found at [canada.ca/energy-future](https://canada.ca/energy-future).

## CONTRIBUTING ACTIONS

To scale up renewable energy and other clean energy technologies, we will:

### Invest in clean energy technologies

Invest in research, development and promotion of clean technologies for electric power generation as well as for cleaner fuels, energy efficiency, reduced emissions from the oil and gas sector, electric vehicle charging infrastructure, smart grid and energy storage technologies. This will include:

- ♦ the [Impact Canada Initiative](#), which uses outcomes-based funding (for example, prize-based challenges) for breakthrough technology solutions
- ♦ the [Clean Growth Program](#), which supports research, development and deployment of clean technologies in the energy, mining and forestry sectors
- ♦ the [Energy Innovation Program](#), which supports projects to reduce greenhouse gas emissions from electricity generation, buildings, transportation and industry

### Promote collaboration and work with partners on clean energy infrastructure

Work with other governments and the private sector to improve the development and deployment of clean and renewable energy. This includes working in partnership with provinces and territories, northern, remote and Indigenous communities, governments, organizations and industry to deliver programs such as:

- ♦ the [Clean Energy for Rural and Remote Communities Program](#), which aims to reduce diesel dependency in rural and remote communities by deploying and demonstrating renewable energy
- ♦ the [Emerging Renewable Power Program](#), which supports emerging renewables such as geothermal, tidal and offshore wind
- ♦ the [Smart Grid Program](#), which supports the demonstration and deployment of smart grid integrated systems projects by utilities, electricity system operators, transmission owners and operators
- ♦ the [Energy Efficient Buildings Program](#), which aims to reduce energy use and emissions in the building sector through the development, demonstration and adoption of cost-effective, highly-efficient “net zero energy ready” building codes and standards, technologies and practices
- ♦ the [Electric Vehicle and Alternative Fuel Infrastructure Program](#), which supports the establishment of a coast-to-coast network of electric vehicle fast chargers, natural gas refuelling stations along key freight corridors and hydrogen stations in metropolitan areas, as well as demonstrations of next-generation electric vehicle infrastructure and the development of enabling codes and standards for low-carbon vehicles and refuelling infrastructure
- ♦ the [Northern Responsible Energy Approach to Community Heat and Electricity Program](#), which aims to reduce the North's reliance on diesel by supporting clean energy projects and capacity building initiatives in northern and Indigenous communities

Explore the potential for small modular reactors—a type of nuclear fission reactor—to provide safe, reliable and clean energy in the future.

### Reduce energy costs and work with partners to increase energy efficiency

Work with partners across the country to increase energy efficiency in Canada. This will include:

- ♦ investments delivered through the Federation of Canadian Municipalities' [Green Municipal Fund](#) to increase energy efficiency in residential, commercial and multi-unit buildings
- ♦ working with the [Canadian Industry Partnership for Energy Conservation](#) to promote innovative energy management, including more energy-efficient practices
- ♦ working with [Efficiency Canada](#), a new organization that provides a voice and evidence-based analysis for the promotion of energy efficiency in Canada

### Support voluntary action to reduce greenhouse gas and air pollutant emissions through clean energy generation and consumption

Encourage businesses to adopt clean energy technologies through the accelerated capital cost allowance for clean energy generation and by supporting clean energy generation. The 2018 Fall Economic Statement announced that equipment that would otherwise be eligible for the accelerated capital cost allowance will be eligible for immediate expensing in the year it is put in use in the business.

### Improve Canadian energy information

Establish a virtual Canadian Centre for Energy Information, to be delivered by Statistics Canada. The centre will compile energy data from several sources into a single easy-to-use website. It will also support ongoing research by Statistics Canada to identify data gaps that would improve the overall quality of energy information available to Canadians.

### Play a leading role in international agreements and initiatives involving clean energy

Demonstrate leadership in innovation and clean energy by participating in international initiatives that are paving the way to a lower carbon future, including:

- ♦ co-leading and participating in several initiatives under the Clean Energy Ministerial—for example, the [Clean Energy Education and Empowerment Initiative](#), which promotes gender equality in the clean energy sector
- ♦ being a member of the [International Renewable Energy Agency](#), the largest global intergovernmental organization promoting the deployment of renewable energy

Continue our bilateral collaborative mechanisms with various global partners, including the US, Mexico, European countries, China, India, South Korea and Japan, in support of clean energy objectives in areas such as clean technology research and development; renewable energy; energy efficiency; oil and gas; carbon capture, use and storage; nuclear energy; and smart grid.

Seek to include provisions in Canada's free trade agreements that promote the use of products and services related to clean and renewable energy.

### CONNECTIONS WITH OTHER FSDS AREAS



Clean energy innovation supports FSDS targets related to climate action, infrastructure, clean growth and innovation:

- ♦ investing in energy technology innovation will reduce our greenhouse gas emissions and support a sustainable environment
- ♦ investing in energy infrastructure will support Canada's energy system by better utilizing the existing energy supply and fostering innovation
- ♦ investing in clean growth will support Canadian clean energy technology companies, fostering competitiveness and creating new opportunities and clean jobs

## TAKE ACTION!

- Consider installing solar panels or a small wind turbine to provide power for your home or business
- Arrange an [EnerGuide home evaluation](#) to learn more about your home's energy performance and how you can improve it
- Consider making energy-efficient renovations to your home, such as adding insulation, caulking and weather-stripping, improving or replacing windows and doors, and upgrading your heating and cooling equipment
- Choose a builder who offers energy-efficient new homes such as ENERGY STAR or R-2000
- Choose energy-efficient appliances and lightbulbs
- Unplug electronics when you're not using them

## CANADA IN THE WORLD

Investing in clean energy supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 7, Affordable and Clean Energy; SDG 9, Industry, Innovation and Infrastructure; and SDG 12, Responsible Consumption and Production. It also supports specific SDG targets, as well as other international agreements and initiatives.

For details on how this goal supports international action, see Annex 3.

## OUR PARTNERS

We work with provinces and territories to implement initiatives under the Pan-Canadian Framework on Clean Growth and Climate Change to support the transition to a low-carbon economy. With energy production and consumption accounting for most of Canada's greenhouse gas emissions, energy sector initiatives are key to meeting greenhouse gas reduction targets.

Provinces and territories are implementing measures to increase their share of renewable energy. For example:

- ♦ Alberta has committed to add 5000 megawatts of renewable energy capacity through its 2030 Climate Leadership Plan to replace coal-fired electricity generation with cleaner energy sources
- ♦ Saskatchewan has committed to increasing renewable electricity generation from 25% in 2017 to as much as 50% by 2030, which will include increasing current wind generation from 221 megawatts to 2 100 megawatts by 2030 and adding 60 megawatts of solar generation by 2021
- ♦ Prince Edward Island is a world leader in generating clean electricity from wind—the province now has a total installed wind capacity of 78% of peak load, which supplies almost 25% of its total electricity requirements

Indigenous communities and organizations also play an active role in clean energy projects across the country. For example:

- ♦ [Indigenous Clean Energy](#) helps to advance Indigenous inclusion in Canada's energy economy through Indigenous leadership, and in collaboration with energy companies, utilities, governments, development firms, clean technology innovators, academics, and capital markets
- ♦ Gwich'in Council International has developed an [Arctic Sustainable Energy Toolkit](#) to guide communities in developing their own comprehensive community plans with step-by-step preparations that use best practices, resource guides, and case studies to help community members create and implement their energy visions

### PARTNERS TAKING ACTION HARNESSING THE SUN'S POWER NORTH OF THE POLAR CIRCLE

**Sree Vyàa is an innovative 480-kilowatt solar project that the Vuntut Gwitchin Government is developing for Old Crow, Yukon. The system will reduce the community's diesel use by 190 000 litres a year and will meet 100% of the community's electricity needs on sunny summer days.**



Photo: © Vuntut Gwitchin First Nation

### PARTNERS TAKING ACTION IDÉNERGIE

**[Idénergie](#) is a Montreal-based company whose aim is to make renewable energy available to all and make energy autonomy easier for individuals and communities. Idénergie is now about to commercialize a renewable energy platform integrating electrical signal correction, remote control, solar power and residential battery management, leading to energy savings and increased renewable energy uptake on the electrical grid.**



# HEALTHY COASTS AND OCEANS



## LONG-TERM GOAL

**Coasts and oceans support healthy, resilient and productive ecosystems**

### WHY IS THIS ISSUE IMPORTANT?

Canada has unparalleled ocean resources and protecting our waters is critical to the lives and livelihoods of all Canadians.

Coasts and oceans are facing challenges from climate change, which is influencing rising sea levels, increasing water temperatures, and loss of marine habitat. Marine shipping, human use and development of our oceans are increasing, which poses environmental risks such as the potential for oil spills, underwater noise and invasive species. Furthermore, we need to continue to take action to ensure that Canadians benefit from healthy, resilient, sustainably managed and productive fisheries and ecosystems over the long term.

The introduction and spread of invasive alien species results in loss of biodiversity, leading to major economic costs. Climate change can make these impacts worse—for example, as colder waters in the Arctic and sub-Arctic become warmer, they become more receptive to potentially invasive alien species from more temperate areas.

Conserving coastal and marine areas helps address environmental challenges, and we are committed to establishing and managing marine protected areas. In doing so, we will recognize the role of Indigenous peoples in Canada and in the traditional use of coastal and marine areas.

#### TALLURUTIUP IMANGA

Located in Nunavut, Tallurutiup Imanga is a large natural and cultural seascape that is one of the most significant ecological areas in the world. It provides important habitat for species such as the polar bear, bowhead whale, narwhal and beluga whale. For Inuit living in the region, it is a place rich in culture and wildlife.

In October 2018, the Government of Canada and the Qikiti Inuit Association reached an Agreement in Principle outlining key elements of the future Inuit Impact and Benefit Agreement for [Tallurutiup Imanga National Marine Conservation Area](#). Once established, Tallurutiup Imanga will be the largest protected area ever established in Canada at 109 000 square kilometres—about 1.9% of Canada's total marine area.

### MARINE SPATIAL PLANNING

**Marine spatial planning** is a process that brings together relevant authorities to better coordinate the use and management of marine spaces to achieve ecological, economic and social objectives. This process provides a collaborative venue to develop a marine spatial plan that helps guide where marine activities are best located and identify areas which need to be avoided or require special measures for conservation or protection.

### MEDIUM-TERM TARGETS

- ◆ By 2020, 10% of coastal and marine areas are conserved through networks of marine protected areas and other effective area-based conservation measures
- ◆ By 2020, all major fish and invertebrate stocks are managed and harvested at levels considered to be sustainable, from a baseline of 96% harvested within established ecosystem limits in 2016

### SHORT-TERM MILESTONES

- ◆ Continue to conduct sustained, coordinated and intensive aerial pollution surveillance over all waters under Canadian jurisdiction through the National Aerial Surveillance Program and ensure that 100% of the assigned pollution patrols are conducted as planned
- ◆ In 2019, conservation network development will be advanced in areas under pressure in priority marine bioregions in collaboration with partners and stakeholders
- ◆ By 2020, [marine spatial planning](#) processes will be initiated in the Gulf of St. Lawrence, the Scotian Shelf/ Bay of Fundy, the Newfoundland-Labrador Shelves, the Salish Sea, and the Pacific North Coast (Northern Shelf), in collaboration with provinces, territories, Indigenous peoples and stakeholders
- ◆ From 2019 to 2022, continue to monitor Canada's ocean disposal sites and ensure that 100% of monitored sites are being used sustainably

- ♦ As part of the [Whales Initiative](#), and additional actions announced on October 31, 2018, continue to develop and implement measures to address underwater noise from vessels to support the protection and recovery of Southern Resident Killer Whales with new measures in place for the summer of 2019
- ♦ As part of the Whales Initiative, starting April 28, 2019 and through the fall, implement a third year of vessel speed restriction measures to reduce the likelihood of lethal vessel collisions with North Atlantic right whales
- ♦ As part of the Whales Initiative, by March 31, 2020, acquire a new aircraft for the National Aerial Surveillance Program, increasing the Program's capacity to deliver on its new whale monitoring responsibilities
- ♦ From 2019 to 2022, implement the Ecological Sustainability Monitoring and Reporting Program for Canada's national marine conservation areas
- ♦ Continue to deliver on the [Ocean Plastics Charter](#) by working with international, provincial, territorial and regional partners to develop and implement an approach to reduce marine litter in Canada
- ♦ As part of the [Oceans Protection Plan](#), by 2020 implement a Coastal Environmental Baseline Program to inform the assessment of cumulative impacts of shipping on marine ecosystems
- ♦ As part of the Oceans Protection Plan, by 2022 23 priority commercial ports across the country will be covered by modern hydrography to support safer navigation for all mariners in Canada

## RESPONSIBLE MINISTER/KEY DEPARTMENTS AND AGENCIES

Minister of Fisheries, Oceans and the Canadian Coast Guard/ Environment and Climate Change Canada; Fisheries and Oceans Canada; Natural Resources Canada; Parks Canada; Transport Canada

## CANADA'S STARTING POINT

- ♦ To measure our progress in conserving coasts and oceans, we track conserved coastal and marine area as a percentage of total marine territory. From 2015 to 2018, coastal and marine area conserved increased from approximately 0.9% to 7.9%.
- ♦ To measure how well we are protecting fish stocks for future generations, we track the proportion of major fish stocks that are harvested at sustainable levels, as well as the abundance and health of those fish stocks. In 2017:
  - ♦ 96% of 179 major fish stocks were managed and harvested at levels considered to be sustainable, up from 90% in 2011
  - ♦ 35% of major fish stocks were classified as healthy, 14% were in the cautious zone, 10% were in the critical zone, and 41% could not be classified due to information gaps
- ♦ To assist in the measurement of coastal ecosystem health, we track the quality of shellfish growing area. In 2017, 68% of Canada's shellfish growing area was classified as approved or conditionally approved for shellfish harvesting for human consumption. We also track the presence of eelgrass, a marine plant species that is sensitive to environmental change.
- ♦ To measure how well we are protecting our coasts from oil pollution from ships, we track the number of vessels monitored using the Automatic Identification System, vessel overflights and the number of ship-source oil spills detected over 10 litres. In 2018, the National Aerial Surveillance Program monitored 371,826 vessels and detected 6 ship source spills over 10 litres.

### TAKING ACTION ON OCEAN PLASTICS

Globally, it is estimated that about 8 million tonnes of plastic pollution enter the oceans every year from land and ships. Canada is playing a leading role in global action to address this urgent problem. Canada spearheaded the development of the [Ocean Plastics Charter](#), which was first adopted in June 2018 by the leaders of Canada, France, Germany Italy, the United Kingdom and the European Union. Canada is also:

- ♦ working to address one of the deadliest forms of plastic pollution for marine animals—lost and abandoned fishing gear—as a signatory to the [Global Ghost Gear Initiative](#)
- ♦ investing \$65 million through the World Bank for an international fund to address plastic waste in developing countries
- ♦ supporting the implementation of a global [action plan to address marine plastic litter from ships](#), adopted by the International Maritime Organization
- ♦ advancing policy and research to reduce plastic pollution through the G7, G20 and the United Nations and participates in the United Nations Clean Seas Campaign and Global Partnership on Marine Litter
- ♦ investing \$12 million in made-in-Canada innovative approaches and technologies that help stop the flow of plastics to the oceans—for example, the [Innovative Solutions Canada](#) program's plastics challenge sought proposals for economically viable and energy efficient ways to recycle fibreglass from vessel hulls and [awarded funding to 2 Nova Scotia businesses for their innovative solutions to ghost gear](#)

## OUR ACTION PLAN

### KEY PRIORITIES

- In support of our marine conservation target, we will continue to work with Indigenous peoples and other partners to conserve marine and coastal areas. For example, we will work with the Government of Nunavut and Qikiqtani Inuit Association to explore the potential creation of marine protected areas in the High Arctic Basin or Tuvaijuittuq—the last portion of the Arctic region expected to retain summer sea ice until at least 2050.
- In support of our sustainable fisheries target, we will continue to support the rehabilitation of wild salmon stocks by:
  - acting on the recommendations of the Cohen Commission on restoring sockeye salmon stocks in the Fraser River, in consultation with Indigenous peoples and the government of British Columbia. This includes implementing our [2018 to 2022 Pacific Wild Salmon Policy Implementation Plan](#)
  - implementing the [Wild Atlantic Salmon Conservation Policy](#) to restore and maintain healthy wild Atlantic salmon populations
  - providing funding to projects through the [British Columbia Salmon Restoration and Innovation Fund](#) announced in the 2018 Fall Economic Statement
- In support of our Healthy Coasts and Oceans goal and our sustainable fisheries target, we will continue to enhance ocean and freshwater research and monitoring for improved decision making by ensuring effective use of restored funding to freshwater, oceans, fish stocks and aquaculture research programs.
- In support of our Healthy Coasts and Oceans goal, we've taken on a leadership role through Canada's G7 presidency and efforts to advance the Ocean Plastics Charter and the Global Ghost Gear Initiative.
- In support of our Healthy Coasts and Oceans goal, we will continue to work on formalizing a moratorium on crude oil tanker traffic on British Columbia's North Coast to protect habitats and communities.
- In support of our Healthy Coasts and Oceans goal, we will continue to examine the implications of climate change on Arctic marine ecosystems. Through research and monitoring activities, we will improve our understanding of changes occurring in Canada's Arctic and the impact of climate change on species and habitats.
- In support of our Healthy Coasts and Oceans goal, we will continue to implement the [Oceans Protection Plan](#), a national \$1.5 billion investment over 5 years, starting in 2017–2018, for building a world-leading marine safety system and strengthening Canada's stewardship of our 3 coasts. For example:
  - partnering with coastal communities to develop a user-friendly, web-based [Enhanced Maritime Situational Awareness](#) system that will increase access to local maritime information, including vessel traffic, and enhance marine safety for Indigenous partners, coastal communities and stakeholders
  - continuing to work with partners on projects aimed at restoring coastal aquatic habitats through the [Coastal Restoration Fund](#)
  - recent legislative amendments to the *Canada Shipping Act, 2001* and the *Marine Liability Act* strengthen marine environmental protection and responses including by enhancing safeguards to protect marine ecosystems; strengthening the Canadian Coast Guard's authorities to support a more proactive, rapid, and effective response to ship-source pollution incidents; and modernizing the [Ship-Source Oil Pollution Fund](#), including making unlimited compensation available to pay all eligible claims from a single incident
  - working with stakeholders and Indigenous and coastal communities in the Arctic and on the West and East coasts on strengthening Canada's environmental response system
  - working with Indigenous and coastal communities to collect baseline data on 6 marine ecosystems in Northern and Southern British Columbia, the St. Lawrence, the Bay of Fundy, the South Coast of Newfoundland and the Eastern Arctic to help understand and inform the national cumulative effects of marine shipping framework
- In support of our Healthy Coasts and Oceans goal and the [Oceans Protection Plan](#), we will continue to implement the Budget 2018 commitment to the 5 year \$167.4 million Whales Initiative, and other announced actions, to address key threats to endangered whale populations in Canada. For example, we are:
  - addressing the imminent threat facing the Southern Resident Killer Whale, which includes \$61.5 million over 5 years, starting in 2019–2020, in additional measures announced on October 31, 2018
  - continuing to refine and implement seasonal measures to reduce the risk of vessel strikes with the North Atlantic Right Whale
  - working collaboratively to identify and implement measures to reduce underwater noise in the estuary of the St. Lawrence, home to the endangered St. Lawrence Estuary Beluga
  - implementing an area closure of Sainte-Marguerite Bay of the Saguenay Fjord to provide refuge in an area frequented by St. Lawrence Estuary Beluga females and their young
  - working with US counterparts, Indigenous groups, industry, and environmental groups to implement immediate measures to reduce vessel traffic impacts on the Southern Resident Killer Whale, and to identify and investigate longer-term measures to protect and support the recovery of this species
  - providing \$1 million annually, starting in 2018, to support expert marine mammal response organizations, with a focus on large whale disentanglement
  - investing in research on technologies to reduce underwater noise from vessels and working internationally to advance quiet vessel design and retrofit options

## CONTRIBUTING ACTIONS

To support healthy coasts and oceans, we will:

### Protect and manage marine and coastal areas

Adopt an integrated management approach for ocean activities that includes marine spatial planning. This will include:

- ♦ initiating collaborative marine spatial planning processes in 5 areas to achieve ecological, economic and social objectives
- ♦ continuing to work with Indigenous peoples, provinces, territories, and stakeholders to develop conservation networks which will guide future conservation efforts in the bioregions, including the selection of appropriate conservation measures
- ♦ continuing to establish and manage [Oceans Act marine protected areas](#), [national marine conservation areas](#), [marine national wildlife areas](#), other [federal protected areas](#) with marine components, and [other effective area-based conservation measures, in accordance with Canada's rights and jurisdiction under international law](#)

### Build our knowledge of coastal ecosystems, marine protected areas and fisheries

Conduct scientific research and analysis to build knowledge of Canada's coasts, oceans and fisheries. This will include:

- ♦ continuing to increase our knowledge of potential impacts of marine accidents on the Arctic environment
- ♦ developing and implementing monitoring protocols for marine protected areas
- ♦ providing evidence-based advice to decision makers on marine ecosystems and environmental stressors
- ♦ improving our knowledge of fisheries resources, their productivity and factors affecting them to support sustainable fisheries management
- ♦ supporting and conducting science on sources, fate, distribution and impacts of marine litter, including plastic litter and microplastics
- ♦ investing in technologies that support better understanding of coastal ecosystems, such as listening stations to monitor underwater noise

### Use legislation and regulations to protect coasts and oceans

Continue to improve laws and regulations and implement those already in place to protect coasts and oceans and ensure fisheries are sustainable. For example:

- ♦ supporting the passage of amendments to the *Oceans Act* that provide the Minister of Fisheries, Oceans and the Canadian Coast Guard authority to designate interim protection of marine protected areas and

modernize enforcement provisions

- ♦ supporting the passage of amendments to the *Fisheries Act* that provide protection and long-term sustainability of our marine resources, including measures to rebuild depleted fish stocks
- ♦ enhancing enforcement of pollution prevention provisions of the *Canada Shipping Act, 2001* that prohibit the release of pollutants from ships
- ♦ strengthening vessel owner responsibility and liability; enabling proactive federal intervention on hazardous vessels; and addressing irresponsible vessel management through implementation and enforcement of the [Wrecked, Abandoned or Hazardous Vessels Act](#)
- ♦ enhancing the ability to regulate marine traffic in order to protect the marine environment, including the impacts of shipping on marine mammals through the *Canada Shipping Act, 2001*
- ♦ lowering risks posed by aquatic invasive species to Canada's coastal ecosystems through updates to [Canada's Ballast Water regulations](#), giving effect to the International Ballast Water Convention in Canada

### Implement policies for sustainable fisheries

Continue to implement Canada's Sustainable Fisheries Framework policies. The framework provides the foundation for an ecosystem approach to fisheries management.

The 2018 Fall Economic Statement provided \$107.4 million over 5 years, starting in 2019–2020, and \$17.6 million per year ongoing, for the rebuilding fish stock provision in the Fisheries Act.

### Work with partners to protect and restore coastal ecosystems

Provide opportunities for ongoing collaboration and work with domestic and international partners to protect and restore coastal and marine ecosystems. This will include ongoing implementation of the Oceans Protection Plan—for example:

- ♦ creating opportunities, through funding mechanisms and training, for Indigenous communities to participate and play an active role in responsible shipping and the marine safety regime
- ♦ contributing to risk-based response planning, enhanced marine weather forecasting and alternative response measures, and strengthening the prevention of and responses to marine incidents
- ♦ providing funding support to eligible groups and harbour authorities to assist in the assessment, removal and disposal of abandoned or wrecked vessels in Canadian waters

## CONNECTIONS WITH OTHER FSDS AREAS



Conserving coastal and marine areas relates to other areas covered by the FSDS, including climate change, lakes and rivers, biodiversity and sustainable food. For example:

- ♦ taking action on climate change can help mitigate impacts on coastal and marine areas such as changing sea levels, ocean chemistry, temperature and marine life
- ♦ species at risk rely on coastal and marine areas throughout their life cycle to recover and thrive
- ♦ coastal and marine ecosystems capture and store carbon and contribute to climate resilience
- ♦ freshwater ecosystems will benefit from ballast water regulations to reduce risks from aquatic invasive species
- ♦ supporting water stewardship and preventing pollution helps reduce risks to fish and their habitat
- ♦ managing risks from harmful substances helps prevent them from polluting coastal areas and oceans
- ♦ investing in wastewater infrastructure helps prevent water pollution from undertreated wastewater

## CANADA IN THE WORLD

Protecting coastal and marine areas supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 6, Clean Water and Sanitation; SDG 12, Responsible Consumption and Production; SDG 14, Life Below Water; and SDG 17, Partnerships for the Goals. It also supports specific SDG targets, as well as other international agreements and initiatives.

Work under this goal supports progress toward the 2020 Biodiversity Goals and Targets for Canada and the global conservation objectives of the United Nations Convention on Biological Diversity—in particular, by supporting our commitments to conserve 10% of our coastal and marine area by 2020 and to manage fisheries sustainably.

For details on how this goal supports international action, see Annex 3.

## OUR PARTNERS

Indigenous peoples, provinces, territories and stakeholders play an important role in coastal and ocean management. They work with us to manage fisheries sustainably; to establish, manage and monitor marine protected areas and develop marine protected area networks; to prevent and address marine pollution; and to carry out integrated oceans management and planning.

Participation of Indigenous peoples is critical to managing fisheries. Indigenous peoples participate in fisheries management in accordance with treaties and land claims agreements and in recognition of Aboriginal rights to fish for food, social and ceremonial purposes. We are working with the National Indigenous Fisheries Institute to review existing Indigenous programs to support participation of Indigenous peoples in developing and delivering programs related to the management of fisheries, aquaculture and aquatic resources, oceans and habitat. Provinces and territories play a role as well—they exercise delegated responsibilities related to sustainable fisheries, such as managing recreational fisheries.

Reconciliation is central to Canada's approach to conserving coasts and oceans. Indigenous peoples work with us to establish and manage marine protected areas and national marine conservation areas. The Anguniaqvia niqiqyuam Marine Protected Area, located in the Inuvialuit Settlement Region in the Western Arctic and designated in 2016, was the first marine protected area with conservation objectives based solely on Indigenous Knowledge.

Industry has an important role in addressing marine pollution. Under our “polluter pays” approach, the ship owner is liable for the costs associated with responding to a spill they cause thereby encouraging them to implement measures to reduce the likelihood of a spill.

Canada is also working with countries around the world to protect oceans and address plastic pollution. For example, in November 2018 Canada co-hosted the first-ever global conference on the sustainable “blue economy” in Nairobi, Kenya. With participants from over 150 countries, the conference focused on creating economic growth that is inclusive and sustainable, ensuring healthy and productive waters, and building safe and resilient communities. Furthermore, in October 2018, Canada joined 57 countries in the first-ever Operation 30 Days at Sea to combat illegal marine pollution activity such as illegal discharges of oil and disposal of waste at sea.

## TAKE ACTION!

- Connect with coastal and ocean ecosystems—visit a marine protected area, a national marine conservation area or a marine national wildlife area
- Help clean up around your neighbourhood by participating in a shoreline or community clean up: check out the [Great Canadian Shoreline Cleanup](#)
- If you see an oil spill or oiled wildlife, report it to the Canadian Coast Guard
- Choose sustainably harvested Canadian fish and shellfish
- Consider contacting the [Canadian Biosphere Reserves Association](#) to explore the potential of partnering with one of Canada's 18 UNESCO biosphere reserves on collaborative, community-based initiatives to protect our coasts and oceans
- Reduce your use of single-use plastics by packing your lunch and investing in reusable containers
- Whether you are fishing for commercial or recreational purposes, make sure you know the [rules](#) for licensing, regulations and catch limits for your region
- If you find a wrecked, abandoned or hazardous vessel, report it to the Canadian Coast Guard's 24/7 regional operation centres:
  - Western (British Columbia, Alberta, Saskatchewan, Manitoba) – 1-800-889-8852
  - Central and Arctic (Ontario, Quebec, Arctic) – 1-800-363-4735
  - Atlantic (Nova Scotia, Newfoundland and Labrador, New Brunswick, Prince Edward Island) – 1-800-565-1633

### PARTNERS TAKING ACTION WRECKED, ABANDONED AND HAZARDOUS VESSELS

As part of the Oceans Protection Plan, [the Abandoned Boats Program](#) provides financial support to communities to assess and remove smaller abandoned or wrecked vessels posing hazards in Canadian waters, and the [Small Craft Harbours Abandoned and Wrecked Vessels Removal Program](#) provides funding to remove wrecked or abandoned vessels from federal small craft harbours. As of March 1, 2019:

- the Abandoned Boats Program has [announced funding](#) for 87 boat removal assessments, 44 boat removal and disposal projects, 5 education and awareness projects, and 3 research projects
- under the Small Craft Harbours' Abandoned and Wrecked Vessels Removal Program, 23 vessels have been removed and disposed of from federal small craft harbours and funding has been awarded to support the future removal of an additional 11 vessels



### PARTNERS TAKING ACTION

#### VANCOUVER FRASER PORT AUTHORITY ENHANCING CETACEAN HABITAT AND OBSERVATION (ECHO) PROGRAM

The Vancouver Fraser Port Authority is playing a regional leadership role through its [Enhancing Cetacean Habitat and Observation \(ECHO\) Program](#), bringing together governments, industry, Indigenous representatives, scientists, and environmental and conservation organizations to coordinate and implement voluntary measures to reduce the cumulative effects of marine traffic on whales, including the endangered Southern Resident Killer Whale. The ECHO program has led in the development and implementation of voluntary vessel slow-downs resulting in a better understanding of how vessel speed affects underwater noise. The collaborative format of the ECHO Program's advisory working groups and technical committees serves as a place for open and frank discussion and consideration of potential mitigation solutions to reduce threats to whales from commercial vessel traffic.

### PARTNERS TAKING ACTION

#### HP CLOSED-LOOP PLASTICS PROGRAM

Over 10 years ago, HP partnered with Montreal's Lavergne Group to develop an innovative closed loop process to make new HP cartridges from recycled cartridges, plastic bottles and clothing hangers. This process has used over 99 000 tonnes of recycled plastic and was used in more than 3.8 billion HP ink and toner cartridges through 2017. This has kept 784 million HP cartridges, an estimated 86 million apparel hangers and 4 billion postconsumer plastic bottles out of landfills. More recently, the partners have worked together to create printers made from recycled printers and other electronics.



### PARTNERS TAKING ACTION

#### INDUSTRY ACTION TO ELIMINATE PLASTIC FROM LANDFILLS

In June 2018, the Canadian Plastics Industry Association and the Chemistry Industry Association of Canada [announced](#) new waste reduction targets:

- an aspirational goal of 100% of plastics packaging being re-used, recycled, or recovered by 2040
- an interim goal of 100% of plastics packaging being recyclable or recoverable by 2030

The new targets reflect priorities of the organizations' members, who represent the broad plastics value chain in Canada.

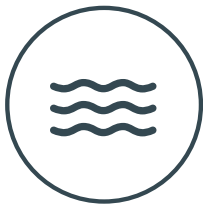
### PARTNERS TAKING ACTION

#### UNESCO BIOSPHERE RESERVES

Many of Canada's UNESCO designated biosphere reserves include coastal and marine areas and facilitate multi-partner initiatives to conserve the health of these waters. From grassroots stewardship projects to collaborations with Indigenous peoples, universities, youth and governments, biosphere reserves create opportunities for organizations to work together to protect aquatic species at risk and increase the protection of marine and coastal areas.



# PRISTINE LAKES AND RIVERS



## LONG-TERM GOAL

**Clean and healthy lakes and rivers support economic prosperity and the well-being of Canadians**

### WHY IS THIS ISSUE IMPORTANT?

Lakes and rivers across Canada—from the Fraser, to the Mackenzie, to the Great Lakes and the St. Lawrence, to the Saint John River, to the Churchill—sustain a rich variety of plants and animals, supply drinking water to millions of Canadians, provide opportunities for swimming, boating and recreational fishing, and support economic activities such as tourism, commercial fisheries, agriculture and shipping.

Many lakes and rivers have been impacted by water pollution and contamination. For example, untreated storm water, urban and agricultural run-off, and undertreated wastewater have caused excessive nutrient levels in some lakes, streams, and rivers, leading to algal blooms and zones of low oxygen that can make water unsafe for drinking, swimming and fishing.

### INTEGRATED WATERSHED MANAGEMENT

**An integrated watershed management approach is a collaborative process in which all decision makers and agencies with management authority work together to meet the goals of a watershed management strategy. Work under this goal reflects an integrated approach that includes collaboration on research, monitoring and actions under basin management agreements in key aquatic ecosystems.**

### MEDIUM-TERM TARGETS

- ♦ Achieve and maintain a 40% reduction in annual phosphorus loading into Lake Erie from a 2008 baseline to meet the binational (Canada-US) phosphorus targets
- ♦ By 2022, reduce nutrient loadings in the Lake Winnipeg Basin by an estimated 44 700 kilograms per year in support of Manitoba's plan to reduce phosphorus in Lake Winnipeg by 50% to pre-1990 levels

### SHORT-TERM MILESTONES

- ♦ From 2019 to 2022, work with stakeholders and the public to take targeted nutrient reduction action in the highest risk areas of the Lake Winnipeg and Lake Erie basins, and strengthen governance and collaborative efforts including with First Nation and Métis governments, organizations and communities
- ♦ Work with Ontario, local governments, First Nations, Métis, watershed management agencies, other local public agencies, and community members to implement Remedial Action Plans to restore impaired beneficial uses across all 14 remaining [Canadian Great Lakes Areas of Concern](#), and to assess approximately 19 other beneficial uses to confirm their impairment status
- ♦ By the end of 2019, complete restoration actions that will assist in delisting 5 Canadian Great Lakes Areas of Concern. In the remaining 9 Areas of Concern, increase the number of restored beneficial uses from 18 in 2014 to 30 in 2019
- ♦ Publish the 2019 State of the Great Lakes Report and the State of Lake Winnipeg Report
- ♦ By the end of 2019, binational strategies are finalized for 8 currently designated Chemicals of Mutual Concern in the Great Lakes
- ♦ Publish the Overview of the State of the St. Lawrence River 2019 by 2020
- ♦ Maintain high compliance rates with [Fisheries Act](#) regulations to reduce risks from metal mining and pulp and paper effluent

### RESPONSIBLE MINISTER/ KEY DEPARTMENTS AND AGENCIES

Minister of Environment and Climate Change/  
Environment and Climate Change Canada; Fisheries and Oceans Canada; Natural Resources Canada; Parks Canada; Transport Canada

## CANADA'S STARTING POINT

- ◆ To measure overall water quality and quantity in Canada, we track indicators that summarize the ability of select rivers across Canada to support aquatic life, and that summarize data from water quantity monitoring stations across Canada. The indicators show that national freshwater quality remained relatively stable between 2002 and 2017 at a majority of sites across southern Canada. Water quality at more than 80% of the sites was within the fair to excellent categories between 2015 and 2017. Water quantity was generally normal between 2001 and 2015.
- ◆ To measure progress on reducing nutrient pollution, we track phosphorus levels as well as reductions in the amount of phosphorus entering lakes and rivers:
  - ◆ as of March 2017, Lake Winnipeg Basin Stewardship Fund projects were preventing an estimated 29 715 kilograms of phosphorus per year from entering Lake Winnipeg and its tributaries
  - ◆ going forward, we will also track estimated total phosphorus loads to Lake Erie, as well as phosphorus reductions resulting from projects funded through the Great Lakes Protection Initiative
- ◆ To measure progress on restoring lake and river ecosystems in the Great Lakes, we track the number of Canadian Great Lakes Areas of Concern and the number of beneficial uses considered Not Impaired. Canadian Areas of Concern have continued to recover in recent years.
- ◆ To measure the extent to which risks associated with industrial effluent are being reduced, we track compliance with regulations to reduce risks from metal mining and pulp and paper effluent. The rate of compliance with these regulations in 2016 is very high—over 95%. Going forward, we will also track compliance in the diamond mining sector.

## OUR ACTION PLAN

### KEY PRIORITIES

- In support of our targets on phosphorus loading to Lake Erie and nutrient pollution in the Lake Winnipeg Basin, we will continue to work with partners to reduce pollution, improve water quality, and restore these ecosystems. For example:
  - we will continue to implement the Great Lakes Protection Initiative, which is helping to address the most significant environmental challenges affecting Great Lakes water quality and ecosystem health
  - through the Canada-Ontario Lake Erie Action plan, established in February 2018, that includes more than 120 actions to reduce phosphorus loads to Lake Erie
  - through the Lake Winnipeg Basin Program, we will continue to conduct and support research, fund projects to reduce nutrient pollution, enhance collaboration and support engagement of Indigenous peoples on freshwater issues in Lake Winnipeg and its basin
- In support of our Pristine Lakes and Rivers goal, we will also continue to work with partners to protect and restore other lake and river ecosystems. For example, we will continue to work collaboratively under the Canada-Quebec Agreement on the St. Lawrence 2011–2026 (St. Lawrence Action Plan) on biodiversity conservation, improved water quality and sustainable use of the river.

## CONTRIBUTING ACTIONS

To protect and manage Canada's lakes and rivers, we will:

### Work with partners on water quality and ecosystem health

Collaborate with other governments, Indigenous peoples and regional stakeholders, in an integrated watershed management approach, to improve water quality and restore key aquatic ecosystems, including through:

- ♦ the Canada-US Great Lakes Water Quality Agreement
- ♦ the Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health
- ♦ the Canada-Ontario Lake Erie Action Plan
- ♦ the Canada-Manitoba Memorandum of Understanding Respecting Lake Winnipeg and the Lake Winnipeg Basin
- ♦ the St. Lawrence Action Plan
- ♦ the Atlantic Ecosystems Initiatives
- ♦ the Gulf of Maine Initiative

Work with Ontario to renew the Canada-Ontario Agreement on Great Lakes Water Quality.

Continue to work with partners to complete the implementation of Remedial Action Plans to clean up and restore beneficial uses in Great Lakes Areas of Concern. Priority areas for de-listing include 5 Areas of Concern: Nipigon Bay, Peninsula Harbour, Niagara River, Bay of Quinte, and St. Lawrence River (Cornwall).

Partner with Indigenous peoples to increase collaboration in major basins. For example, we have signed a Saint John River/Wəlastəkw Interim Statement of Cooperation with the US federal government and Maliseet First Nations/Tribal Nation. This is a nation-to-nation commitment to cooperate in the restoration of the watershed and ecosystem.

### Provide support and funding for projects

Support projects to improve water quality and help restore ecosystems in the Great Lakes, the St. Lawrence River, and the Lake Winnipeg Basin. This work will include action to:

- ♦ reduce nutrient pollution
- ♦ restore water quality and ecosystem health of Great Lakes Areas of Concern
- ♦ reduce releases of harmful chemicals
- ♦ increase public engagement through citizen science
- ♦ engage Indigenous peoples
- ♦ enhance research and monitoring capacity essential to the restoration of the watersheds
- ♦ enhance collaboration to protect freshwater quality throughout the watersheds

## Better understand lake and river ecosystems

Conduct scientific research and analysis to better understand lake and river ecosystems, monitor their health, and provide information to support stakeholder decision making and help Canadians monitor the state of lakes and rivers.

For example, reports will be released on:

- ♦ groundwater science
- ♦ the fate and effect of metals associated with regulated mining discharge into lakes and rivers
- ♦ the state of the Great Lakes (a joint Canada-US report targeted for release in June 2019)
- ♦ the state of Lake Winnipeg (a joint Canada-Manitoba publication targeted for release in June 2019)
- ♦ the state of the St. Lawrence River (expected by 2020)

### Use legislation and regulations to protect lake and river ecosystems

Implement legislation and regulations that protect lake and river ecosystems from pollution and other threats. For example, administer regulations under the [Fisheries Act](#) to reduce risks from wastewater and industrial effluent.

## CONNECTIONS WITH OTHER FSDS AREAS



Protecting lakes and rivers supports other FSDS targets related to ensuring clean drinking water and building safe and healthy communities; achieving this goal is enabled by targets related to climate action and sustainable food:

- ♦ lakes, rivers and groundwater are significant sources of drinking water for Canadians
- ♦ climate change is affecting the health of lakes and rivers by potentially affecting nutrients, pH, and temperature, and putting pressure on Canada's water resources
- ♦ sustainable agricultural practices can enhance the quality of water running off or draining from agricultural land
- ♦ managing risks from harmful substances helps prevent them from polluting lakes and rivers
- ♦ investing in wastewater infrastructure helps prevent water pollution from undertreated wastewater
- ♦ freshwater ecosystems will benefit from ballast water regulations to reduce risks from aquatic invasive species



## TAKE ACTION!

- To prevent runoff into waters, follow the instructions on the label when using fertilizers or pesticides
- Help reduce the spread of aquatic invasive species—for example, by thoroughly cleaning, draining and drying your boat when moving it between water bodies
- Bring unused and expired medications to your local pharmacist for proper disposal
- Recycle and compost waste; never litter
- Consider the environmental impact when choosing and using cleaning and personal care products that go down the drain
- Conserve water at home and at work—for example, by:
  - fixing drips and leaks
  - installing low-flow shower heads and toilets
  - turning off the water when brushing teeth and shaving
  - not using water to clean your driveway
- Properly dispose of harmful substances such as paints and oils—dumping them into storm drains can harm the environment
- Participate in citizen science. Visit our [Citizen Science Portal](#) to learn more about initiatives that you can participate in

## CANADA IN THE WORLD

Protecting lakes and rivers supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 6, Clean Water and Sanitation; SDG 8, Decent Work and Economic Growth; SDG 12, Responsible Consumption and Production; SDG 14, Life Below Water; SDG 15, Life on Land; and SDG 17, Partnerships for the Goals. It also supports specific SDG targets, as well as other international agreements and initiatives.

Work under this goal supports progress toward the 2020 Biodiversity Goals and Targets for Canada and the global conservation objectives of the United Nations Convention on Biological Diversity—in particular, by helping to reduce pollution levels, including pollution from excess nutrients.

For details on how this goal supports international action, see Annex 3.

## OUR PARTNERS

Some lakes and rivers, such as the Great Lakes and Lake Winnipeg, have basins that cross provincial and national boundaries. As a result, we work with a broad range of partners to solve the challenges facing these ecosystems.

Provinces and territories share jurisdiction over lakes and rivers with the federal government, and are working with us toward shared objectives for the Great Lakes, the St. Lawrence River, and Lake Winnipeg. Indigenous Peoples, communities and environmental non-governmental organizations also play important roles.

Meanwhile, Canada works with US federal and state governments to address transboundary water issues binationally, as well as the [International Joint Commission](#) and its boards, committees and task forces. Canada and the US also work together through the [Great Lakes Fishery Commission](#) to improve and perpetuate the Great Lakes fishery.

### PARTNERS TAKING ACTION COMMUNITY INTERACTION PROGRAM

The Community Interaction Program under the St. Lawrence Action Plan provides funding for projects led by Indigenous communities, not-for-profit organizations and other partners to conserve biodiversity, improve water quality and ensure the sustainable use of the St. Lawrence. Examples of projects include the experimental restoration of an eelgrass bed in Mitis Bay and the feasibility study on the installation of an eel ladder and assessment of the abundance, distribution and quality of habitat in the St. Charles River.



### PARTNERS TAKING ACTION ALBERTA OIL SANDS ENVIRONMENTAL MONITORING PROGRAM

The Governments of Canada and Alberta are working with Indigenous peoples and their communities, stakeholders and environmental agencies to ensure the oil sands region is developed in a responsible way. Together we are working to provide comprehensive environmental monitoring data and information to improve understanding of the long-term cumulative effects of oil sands development. The monitoring program includes collecting water data to assess oil sands contaminants in the Athabasca River System, including monitoring water quality and quantity, sediment, and fish health.



# SUSTAINABLY MANAGED LANDS AND FORESTS



## LONG-TERM GOAL

**Lands and forests support biodiversity and provide a variety of ecosystem services for generations to come**

## WHY IS THIS ISSUE IMPORTANT?

Canada's natural spaces, including forests, wetlands, grasslands, peatlands and tundra, as well as agricultural lands, provide habitat that wildlife populations need to thrive. They also provide ecosystem services that are essential for our well-being, such as filtering our air and water and storing carbon dioxide, an important greenhouse gas.

Forests are fundamental to the cultural and spiritual values of Indigenous peoples. Lands and forests also contribute to Canada's economy. In 2017, the forest sector contributed about \$23 billion to Canada's economy and directly supported about 209 940 jobs across the country.

While Canada enjoys large tracts of forest land and other wilderness areas, we cannot take them for granted. Protecting and sustainably using lands and forests is necessary to ensure they provide benefits for the long term. Canada's world-class national park system includes 46 national parks and 1 national urban park that protect over 328 198 square kilometres of land to pass on unimpaired to future generations.

Protecting forested areas also helps to protect and sustain lands of cultural importance to Indigenous peoples and maintain traditional uses of the land and resources.

## MEDIUM-TERM TARGETS

- ♦ By 2020, at least 17% of terrestrial areas and inland water are conserved through networks of protected areas and other effective area-based conservation measures
- ♦ By March 31, 2023, ecological integrity will be maintained or improved in 92% of national park ecosystems
- ♦ Between now and 2022, maintain Canada's annual timber harvest at or below sustainable wood supply levels

## CANADA'S NATURE LEGACY

**Funding through Canada's Nature Legacy supports our Sustainably Managed Lands and Forests goal. For example:**

- through the new Challenge Fund, we are providing support for projects that help meet Canada's target of conserving at least 17% of land and inland waters by 2020
- we have announced early funding for 28 Indigenous projects under the Indigenous Guardians Pilot Program
- we are supporting the establishment of at least 20 Indigenous Protected and Conserved Areas, making significant progress towards our target and contributing meaningfully to reconciliation—beginning with Edézhíe Protected Area in the Northwest Territories which was designated in October 2018
- we continue to work with partners to establish new protected areas in Canada and manage existing ones

## SHORT-TERM MILESTONES

- ♦ Put a plan in place for conservation of Canada's lands and inland waters beyond 2020
- ♦ Renew the [National Parks System Plan](#) by 2020
- ♦ Create 9 new national wildlife areas and 1 new conservation area by 2020
- ♦ Between now and 2020, maintain Canada's annual timber harvest at or below sustainable wood supply levels

## GRASSLANDS CONSERVATION IN CANADA

Canada's grasslands extend from Ontario, through the Prairies, and into British Columbia. They provide habitat for species, conserve soil and water, and provide valuable grazing land for cattle. However, today, temperate grasslands are the most endangered biome on the planet. In Canada, about 70% of native grasslands have been lost.

Grasslands National Park, located in southwestern Saskatchewan, was established in 1981 to protect mixed-grass prairie. Since then we have worked to restore and enhance ecosystems within the park through actions such as implementing a multi-species at risk action plan for Grasslands National Park, enhancing regional connectivity, utilizing beneficial cattle grazing and re-vegetating previously cultivated fields with native grasses and wildflowers. We have also reintroduced the Plains Bison, used fire to promote the growth of native plants and control invasive species, and enhanced the habitat of multiple species at risk including the endangered Greater Sage Grouse.

## RESPONSIBLE MINISTERS/ KEY DEPARTMENTS AND AGENCIES

Minister of Environment and Climate Change; Minister of Natural Resources / Atlantic Canada Opportunities Agency; Canadian Food Inspection Agency; Department of Finance Canada; Environment and Climate Change Canada; Jacques Cartier and Champlain Bridges Incorporated; Natural Resources Canada; Parks Canada; Statistics Canada

## CANADA'S STARTING POINT

- ♦ To measure our success in conserving lands and inland waters, we track area conserved as a proportion of total land and freshwater. As of the end of 2018, 11.2% had been conserved through networks of protected areas and other effective area-based conservation measures. Reflecting ongoing increases in conserved area, in April 2019 the Minister of Environment and Climate Change [announced](#) that 11.8% of Canada's land and fresh water has now been conserved.
- ♦ Tracking the ecological integrity of our national parks helps us to understand how effectively we are managing these areas. We assess ecological integrity by regularly monitoring parks ecosystems such as forests, grasslands, freshwater and wetlands. As of March 2018, the ecological integrity of 88% of Canada's national park ecosystems was either stable or improving.

- ♦ To measure our progress on managing our forests sustainably, we track how they are changing over time. In 2015, Canada had 347 million hectares of forest land—the third-largest forest area in the world. Annually, less than 0.02% of that land is deforested (that is, permanently converted to another land use type).
- ♦ We also track the amount of timber harvested annually relative to the wood supply (the maximum volume that can be harvested from an area over a specified period of time while meeting environmental, economic and social objectives). In 2016, 157 million cubic metres of timber was harvested, while the estimated wood supply was 223 million cubic metres.
- ♦ Going forward, to measure how human activity is transforming the landscape and affecting wildlife and the environment, we will track changes in land use over time—for example, from agriculture to settlements and forest land to agriculture.

## NATURE CHAMPIONS SUMMIT: CALL TO ACTION

Canada is taking action through historic investments in conservation and is doubling the amount of nature we protect across our lands and oceans. In April 2019, Canada hosted the [Nature Champions Summit](#), in Montréal. A coalition of Nature Champions – including international leaders from philanthropy, industry, non-governmental organizations, United Nations agencies, Indigenous peoples and governments at all levels from around the world – came together and issued a Call to Action. The global call to action recognizes that protecting nature has important intrinsic value, supports strong economies and communities, and is a critical tool for fighting climate change and adapting to its impacts. It includes commitments to increase the amount of nature protected worldwide and mobilize new resources to support that goal; address the root causes of biodiversity loss; and ensure global economic, cultural, political, and social decision-making reflect the critical need to protect nature.

## OUR ACTION PLAN

### KEY PRIORITIES

- In support of our terrestrial ecosystem conservation and health of national parks targets, Canada's Nature Legacy will protect Canada's ecosystems, landscapes and biodiversity through:
  - an expanded, strengthened and connected network of protected and conserved lands and inland waters in Canada that will strive to conserve 17% of land and inland waters by 2020, including by managing and expanding federal protected areas
  - transitioning the species at risk program from recovery planning to protection and recovery action for up to 230 species at risk (200 terrestrial and 30 aquatic) by addressing priority places, species, and threats
  - building relationships and advancing reconciliation with Indigenous peoples recognizing their rights, responsibilities for lands, wildlife stewardship and related cultural activities to deliver conservation outcomes
- In support of our terrestrial ecosystem conservation and health of national parks targets, Budget 2018 announced \$1.3 billion over 5 years to support Canada's biodiversity and protect species at risk between 2018 and 2023, including \$500 million toward a new \$1 billion Canada Nature Fund
- In support of our terrestrial ecosystem conservation target, we launched the Challenge Fund and the Natural Heritage Conservation Program in fall 2018. The Challenge Fund will provide up to \$175 million for projects that help meet Canada's target of conserving at least 17% of land and inland waters by 2020. Starting in 2018–2019, the \$100 million Natural Heritage Conservation Program will enable a pan-Canadian approach to acquiring private land and private interest in land for the purpose of establishing new protected and conserved areas.
- In support of our terrestrial ecosystem conservation target, in fall 2018 28 Indigenous projects were selected for early funding under the Indigenous Guardians Pilot Program. The pilot program provides Indigenous peoples with greater opportunity to exercise responsibility in stewardship of their traditional lands, waters, and ice.
- In support of our terrestrial ecosystem conservation target, in October 2018 Edézhíe Protected Area became the first Indigenous protected area designated under Budget 2018's Nature Legacy. Located in the traditional Dehcho territory in the southwestern part of the Northwest Territories, Edézhíe provides important habitat for species such as boreal woodland caribou and wood bison.
- In support of our terrestrial ecosystem conservation target, we will continue to work with our partners to establish new protected areas in Canada, including the proposed Thaidene Néné national park reserve, Manitoba Lowlands national park, and South Okanagan-Similkameen national park reserve.
- In support of our Sustainably Managed Lands and Forests goal, Budget 2019 proposed to provide \$251.3 million over 3 years, starting in 2020–2021, to support and grow Canada's forestry sector by extending innovation and diversification programs such as the Forest Innovation Program and Investments in Forest Industry Transformation program.
- In support of our Sustainably Managed Lands and Forests goal, in April 2019 Canada hosted the Nature Champions Summit in Montreal to ramp up global action to protect nature. The summit kicked off a series of multilateral meetings focused on building momentum towards 2020, when leaders representing 190 countries will come together for the Conference of the Parties to the Convention on Biological Diversity in China.

## CONTRIBUTING ACTIONS

To work with partners to manage and use lands and forests sustainably, we will:

### Better understand lands and forests

Continue to conduct scientific research to better understand protected areas and managed forests and support decision making, including forest management plans. This will include:

- ♦ increasing understanding of forest conditions and changes in response to natural disturbances, climate change, and forest management practices
- ♦ working with partners under the National Forest Pest Strategy to help assess the threat to Canada's forest posed by the mountain pine beetle and identify effective mitigation and adaptation options
- ♦ assessing the cumulative effects of natural resource development on Canada's forests
- ♦ developing statistical infrastructure on land cover and land use to monitor changes in the extent of key ecosystem types, including those disturbed by fires, pests and invasive alien species
- ♦ developing more refined spatial analysis of the managed forest to improve understanding of forest carbon, especially as it relates to climate change
- ♦ conduct science and research related to parks and protected areas—including, for example, to better understand and promote ecological connectivity between protected areas, increase understanding of the effects of land cover and use on wildlife and ecosystems, and better incorporate Indigenous Knowledge into management decisions

### Build capacity and provide support

Provide support and funding for sustainably managed lands and forests and to increase Indigenous communities' participation in Canada's forest sector. For example, under the [Indigenous Forestry Initiative](#), Canada invests \$1 million each year to support Indigenous forestry and related natural resources projects. In support of the Softwood Lumber Action Plan, announced in June 2017, we committed to invest an additional \$10 million over 3 years in the initiative to encourage continued innovation, diversification and resiliency of Canada's forest sector.

### Conserve natural spaces

Through Nature Legacy funding, secure private land, expand national wildlife areas and migratory bird sanctuaries, increase our capacity to manage protected areas, and establish a coordinated network of conservation areas.

Establish and manage new protected areas and other effective area-based conservation measures, including privately protected areas supported by new investments announced in Budget 2018 and tax incentives for donation of private lands or partial interest in lands to charitable land trust organizations or government bodies under the [Ecological Gifts Program](#). These actions will be guided by a renewed federal, provincial, territorial and Indigenous government approach to land and water conservation in Canada.

Through a \$74.75 million investment between 2018 and 2023, work in partnership with the Atlantic provinces and the forest industry to test an innovative intervention strategy aimed at preventing the spread of spruce budworm, one of the most damaging pests to spruce trees in Canada.

Continue to monitor the ecological integrity of national park ecosystems, to restore impaired ecosystems and to recover species at risk through the national [Conservation and Restoration Program](#) and other national park-based initiatives.

### Use legislation and regulations to manage the spread of invasive alien species

Manage the spread and introduction of invasive alien species by promoting compliance and carrying out enforcement activities. Design, develop and implement pre-, at- and post-border initiatives to limit the introduction and spread of invasive alien plants and pests to Canada's environmental resources, such as forests and agricultural lands.

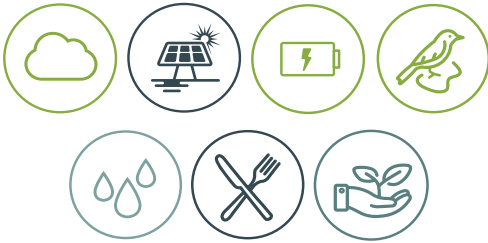
### Work with domestic and international partners

Provide opportunities for collaboration with stakeholders, Indigenous communities and organizations, and work with domestic and international partners to implement joint initiatives. Manage risks to natural resource sectors, infrastructure and human health by regulating pests and the pathways through which they can be introduced and spread, by providing scientific knowledge and by working with the provinces and territories through the [Canadian Council of Forest Ministers](#) and by advancing [Canada's Wildland Fire Strategy](#), [National Forest Pest Strategy](#), [An Invasive Alien Species Strategy for Canada](#), [Plant and Animal Health Strategy for Canada](#) and [Emergency Management Framework for Agriculture](#).

### Work with Indigenous peoples

Work with Indigenous peoples to protect and conserve lands and waters, including through the pilot Indigenous Guardians Program. This initiative facilitates opportunities for Indigenous peoples to connect with and manage traditionally used lands and waters through, for example, monitoring ecological health, maintaining cultural sites, and protecting sensitive areas and species.

## CONNECTIONS WITH OTHER FSDS AREAS



Conserving lands and managing forests sustainably supports FSDS targets related to climate action, protecting plants and animals, sustainable food, clean growth, clean energy and helping Canadians connect with nature:

- ♦ actions related to forests and other ecosystems can provide natural solutions to climate change and protect communities from climate change impacts and extreme weather
- ♦ healthy lands and forests provide habitat that species at risk need to recover and thrive as well as increasing the biodiversity of our agricultural working landscapes
- ♦ national parks and other protected areas provide opportunities for Canadians to connect with nature and help build sustainable communities
- ♦ making energy exploration more sustainable includes reducing its impact on the land, helping to protect natural spaces and biodiversity
- ♦ investments in clean technology and innovation directly contribute to sustainable practices in the forest sector and increase economic benefits
- ♦ management and conservation of wetlands can help protect drinking water supplies from contamination

## CANADA IN THE WORLD

Conserving lands and managing forests sustainably supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 8, Decent Work and Economic Growth; SDG 11, Sustainable Cities and Communities; and SDG 15, Life on Land. It also supports specific SDG targets, as well as other international agreements and initiatives.

Work under this goal supports progress toward the 2020 Biodiversity Goals and Targets for Canada and the global conservation objectives of the United Nations Convention on Biological Diversity—in particular, by supporting our commitment to conserve at least 17% of Canada's terrestrial areas and inland waters by 2020, and by helping to ensure continued progress on sustainable forest management.

For details on how this goal supports international action, see Annex 3.

## OUR PARTNERS

Provinces, territories, municipalities, Indigenous peoples, non-governmental organizations, the private sector and individual landowners all play a role in conserving natural spaces. For example:

- ♦ provinces and territories establish and manage provincial and territorial parks, and support conservation by providing information, assistance and incentives
- ♦ Indigenous peoples play a key role in the establishment, protection and management of protected areas in traditionally used lands and waters in a variety of jurisdictions
- ♦ non-governmental organizations help landowners and businesses implement conservation on private lands through conservation easements, covenants and other measures

As the order of government responsible for natural resources management, provinces and territories develop and enforce legislation, set standards and implement programs to ensure their forest resources are managed sustainably. Indigenous peoples also control and manage a growing portion of Canada's forest land and are important partners in achieving conservation and management goals.

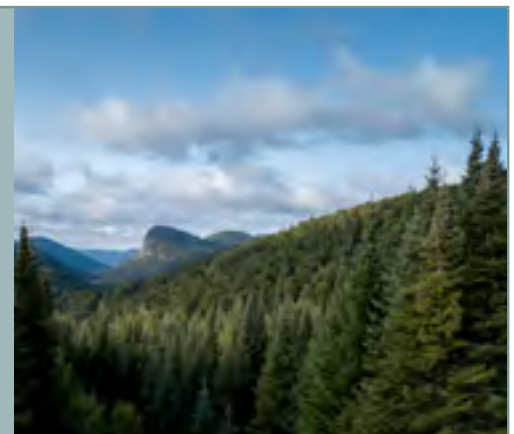
Canada leads the world in forest area certified by third parties, which provides further assurance that a company is operating legally, sustainably, and in compliance with globally recognized standards. Certification complements Canada's already comprehensive forest management regulation.

## TAKE ACTION!

- Visit a national park or other protected area
- Participate in protected area interpretive programs and cultural experiences presented by Indigenous peoples
- Consider donating land or a partial interest in land through the [Ecological Gifts Program](#)
- Participate in citizen science by joining in the collection and analysis of information in collaboration with scientists
- [Volunteer with Parks Canada](#)
- Recycle and compost waste; never litter
- Take conservation actions such as maintaining trees on your property and not putting up fences that can impede animal migration
- Consider third-party forest certification in your purchasing decisions
- Reduce paper usage by moving to online, paperless billing
- Consider contacting the [Canadian Biosphere Reserves Association](#) to find out how you can get involved in local conservation efforts with a UNESCO biosphere reserve near you

### PARTNERS TAKING ACTION ECOSYSTEM RESEARCH SUPPORTING SUSTAINABLE FOREST MANAGEMENT

[Ecosystem-Based Management Emulating Natural Disturbance \(EMEND\)](#) is a large-scale, long-term, landscape-level project that allows researchers to conduct studies in a working industrial forest. EMEND is improving our understanding of how the western boreal forest ecosystem responds to disturbances—both natural and human-caused. This knowledge is helping the forest sector improve and adapt operational practices, make informed management decisions, and maintain market access. It is also teaching us about the best approaches to maintain healthy, sustainable forest ecosystems in Canada's boreal regions.







# HEALTHY WILDLIFE POPULATIONS



## LONG-TERM GOAL

**All species have healthy and viable populations**

## WHY IS THIS ISSUE IMPORTANT?

Canada's plants and animals, together with the environments where they live, make up the ecosystems that benefit Canadians through valuable services such as providing food and medicines, controlling floods, and pollination. Maintaining biodiversity—the variety of genes, species and ecosystems, including the ecological processes that allow them to evolve and adapt—helps ensure that ecosystems can continue to function and provide the services we depend on.

Healthy wildlife populations and habitat are important parts of biodiversity. Some species in Canada have experienced population declines and some are now at risk of becoming extinct. Species can become threatened as a result of habitat loss or deterioration from human activities—for example, agriculture, urban development, invasive alien species, pollution and climate change. Climate change can also affect wildlife health and contribute to the spread of disease.

## CANADA'S NATURE LEGACY

Funding through Canada's Nature Legacy supports our Healthy Wildlife Populations goal. For example:

- we are providing up to \$155 million over 5 years to help implement the Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada
- The Canada Nature Fund for Aquatic Species at Risk supports projects with a focus on 7 priority freshwater places and 2 priority marine threats
- over the coming months, we will be announcing directed funding for priority places to help protect species at risk across Canada

## PAN-CANADIAN APPROACH TO TRANSFORMING SPECIES AT RISK CONSERVATION IN CANADA

In June 2018, federal, provincial and territorial ministers approved the [Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada](#). This new framework shifts terrestrial species at risk conservation to more multi-species and ecosystem-based approaches. The new Pan-Canadian Approach includes principles to guide collaborative action.

## PAN-CANADIAN APPROACH TO WILDLIFE HEALTH

Recognizing that wildlife health is crucial in conserving biodiversity, in June 2018 ministers also endorsed A Pan-Canadian Approach to Wildlife Health. Its goal is to strengthen Canada's capacity to identify and reduce wildlife health threats that put conservation, public health, or economic and cultural opportunities at risk.

## MEDIUM-TERM TARGETS

- ♦ By 2020, species that are secure remain secure and populations of species at risk listed under federal law exhibit trends that are consistent with recovery strategies and management plans
- ♦ By 2025, increase the percentage of migratory bird species whose populations sizes fall within an acceptable range—neither too low nor too high—from a baseline of 57% in 2013

## SHORT-TERM MILESTONES

- ♦ By 2020, early actions are implemented for a large number of terrestrial species at risk within priority places and for priority species
- ♦ By 2020, development of sector-based action plans for priority sectors and threats is completed
- ♦ By 2019, the percentage of bird species under federal jurisdiction with population sizes within an acceptable range has increased by more than 2 percentage points over 2013
- ♦ By 2020, pathways of invasive alien species introductions are identified, and risk-based intervention or management plans are in place for priority pathways and species
- ♦ By 2020, a shared, national 5-year strategic and operation plan to support and implement the goals identified in A Pan-Canadian Approach to Wildlife Health is developed
- ♦ By 2019, confirm a national set of priority marine threats and priority freshwater places that are the focus of the Canada Nature Fund for Aquatic Species at Risk

## RESPONSIBLE MINISTER/KEY DEPARTMENTS AND AGENCIES

Minister of Environment and Climate Change / Canada Border Services Agency; Canadian Food Inspection Agency; Environment and Climate Change Canada; Fisheries and Oceans Canada; Jacques Cartier and Champlain Bridges Incorporated; National Defence; Parks Canada

## CANADA'S STARTING POINT

- ♦ To measure our progress in conserving terrestrial and aquatic wildlife species, we track the percentage assessed as secure or at-risk, the success of efforts to help them recover, and their risk of disappearing from Canada. As of May 2018, out of 126 species at risk with recovery strategies or management plans in place and whose population-oriented goals had been reassessed, 41% showed population trends consistent with the goals of the recovery strategies.
- ♦ To help us understand the state of migratory birds in Canada, we track the percentage of these birds whose populations fall within an acceptable range—neither too low nor too high. In 2013, 57% of migratory bird species that are addressed in the *Migratory Birds Convention Act* and regularly found in Canada had population sizes in an acceptable range. An updated assessment is underway.
- ♦ To assess changes in the state of wildlife health, we conduct wildlife health surveillance in partnership with the provinces and territories as well as non-government partners such as the Canadian Wildlife Health Cooperative. This enables early detection of emerging threats and evidence-based management action. The Canadian Wildlife Health Cooperative produces an [annual report](#) to track wildlife issues of priority concern.

## OUR ACTION PLAN

### KEY PRIORITIES

- In support of our healthy wildlife population goal and targets, we continue implementing the *Species at Risk Act*, which is one of our main strategies for protecting wildlife species at risk. To ensure it is effective, we are working actively with provinces and territories to complete the robust species-at-risk recovery strategies and management plans within the timelines that the Act requires.
- In support of our healthy wildlife population goal and targets, Budget 2018 announced the \$1.3 billion Canada's Nature Legacy: to support Canada's biodiversity and protect species at risk between 2018 and 2023, including \$500 million toward a \$1 billion Canada Nature Fund.
- In support of our healthy wildlife population goal and targets, we will work with provincial and territorial governments to implement the new Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada, including working with partners to implement a shared national set of priority places, species and threats to guide conservation efforts. By working together and through support from Canada's new Nature Fund, this will enable investments and innovative partnerships to advance recovery and protection for a large number of terrestrial and aquatic species at risk throughout the country.
- In support of our healthy wildlife population goal and targets, we will work with federal, provincial and territorial partners to implement the new Pan-Canadian Approach to Wildlife Health, and will recommend implementation options for consideration by the Federal-Provincial-Territorial Ministers in 2019.
- In February 2019 we launched the Community-Nominated Priority Places for Species at Risk Program. This funding initiative will provide up to \$15.6 million over 4 years, starting in 2019–2020, to support projects in communities that are bringing people together to protect species at risk.
- In February 2019 we launched the Canada Nature Fund for Aquatic Species at Risk. This funding initiative will provide up to \$55 million over 5 years, starting in 2018–2019, to support projects that help to recover aquatic species at risk.

## CONTRIBUTING ACTIONS

To protect and conserve wildlife in Canada, we will:

### **Work with partners to implement the Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada**

Through the Nature Legacy and Canada Nature Fund (Species Stream), the government has committed up to \$155 million over 5 years, starting in 2018 to 2019, to help implement the Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada. Most of this funding will be directed to major initiatives for the priority places, species, and sectors.

With our partners, strategically focus efforts and resources on shared priority places, species and threats to enable ecosystem-based approaches with multi-species and biodiversity conservation benefits.

### **Work with partners to implement A Pan-Canadian Approach to Wildlife Health**

Through a new Wildlife Health Advisory Committee, work with partners to develop management and policy recommendations to implement A Pan-Canadian Approach to Wildlife Health. This forum will enable us to focus efforts and resources on shared priorities and address discrepancies in capacity across Canada, particularly in rural and northern regions, and for emerging threats related to climate change.

### **Implement, innovate and modernize the regulatory and policy framework and tools to protect species at risk and migratory birds**

Implement legislation, regulations and tools that support the new priority-based approach to protecting species at risk and migratory birds. This will include, for example:

- ♦ continuing to assess and list species and develop timely recovery strategies and action plans under the *Species at Risk Act*
- ♦ protecting critical habitat essential for the survival or recovery of species at risk, such as where they give birth, hatch, feed or raise their young
- ♦ working in partnership with Indigenous peoples to protect, conserve and recover species at risk
- ♦ promoting compliance with the *Migratory Birds Convention Act, 1994*
- ♦ implementing Parks Canada site-based action plans for species at risk
- ♦ developing tools to assess and protect habitat for species at risk, such as Woodland Caribou (boreal population)

## **Deliver enhanced conservation action**

Make significant, targeted and sustained investments under the new Canada Nature Fund that drive partnerships, co-investment, innovation and improved conservation outcomes, with a focus on priority places, species and threats. This will include continuing to support projects in communities that are bringing people together to protect species at risk through the Canada Nature Fund for Aquatic Species at Risk and the Community-Nominated Priority Places for Species at Risk fund.

### **Work with partners to enhance foundational knowledge of species, habitats and ecosystems**

Carry out research and share information to protect and recover wildlife species—for example:

- ♦ develop decision support tools and promote evidence-based practices for agriculture, forestry, fisheries and urban development to identify and address common threats to multiple species
- ♦ conduct research to advance protection and recovery action for priority species at risk and migratory birds, including through the co-application of western science and Indigenous Knowledge
- ♦ collaborate with provinces, territories and other partners on national studies and analyses related to priority invasive alien species and pathways
- ♦ continue to participate in the National Aquatic Invasive Species Committee, a federal-provincial-territorial committee that provides a forum for planning, coordination, and information exchange
- ♦ develop inventories and characterizations of lands in order to improve knowledge of ecosystems

### **Build capacity and promote education**

Build capacity to protect, conserve and restore species and their habitat—for example, by:

- ♦ administering the Habitat Stewardship Program, which supports conservation projects that engage Canadians in conservation actions to benefit wildlife
- ♦ administering the Aboriginal Fund for Species at Risk, which supports the active participation of Indigenous peoples in implementing the *Species at Risk Act*
- ♦ administering the Canada Nature Funds (Species Stream) to support partnerships with Indigenous peoples for the protection and recovery of species at risk
- ♦ investing \$2.25 million over 3 years, starting in 2018–2019, in programs for Engaging Canadian Kids in Wildlife Conservation, to be delivered across Canada
- ♦ providing the [Baitfish Primer](#), an app that helps recreational fishers ensure that the bait they are using is neither an invasive species that could damage the ecosystem, nor a species at risk

- ♦ maintaining an [online aquatic species at risk map](#) that lets Canadians know where aquatic species at risk and their critical habitat are located across Canada
- ♦ co-leading, with the International Union for Conservation of Nature, the global [#NatureForAll initiative](#), which is bringing together more than 50 partner organizations in Canada and more than 350 worldwide to scale up programming that connects people with nature and inspires broad-based public and cross-sectoral support and action for conservation

### Uphold international commitments related to wildlife

Work with international partners to protect and conserve species at risk and fulfill Canada's obligations under international agreements—for example:

- ♦ the Convention for the Protection of Migratory Birds in the United States and Canada
- ♦ the Convention on International Trade in Endangered Species of Wild Fauna and Flora
- ♦ the United Nations Convention on Biological Diversity

### CONNECTIONS WITH OTHER FSDS AREAS



Protecting Canada's wild species is closely linked to FSDS targets related to climate change, coasts and oceans, lakes and rivers, lands and forests, sustainable food, clean energy, and innovation:

- ♦ reducing greenhouse gas emissions and helping nature adapt to the impacts of climate change can help protect wildlife now and in the future
- ♦ Canada's lands and forests, as well as freshwater, marine and coastal areas, provide habitat that species at risk need to recover and thrive
- ♦ sustainable agricultural practices can help make farmland more hospitable to wildlife
- ♦ making energy exploration more sustainable includes reducing its impact on the land, helping to protect natural spaces and biodiversity
- ♦ connecting with nature can inspire Canadians to help conserve ecosystems and species

### CANADA IN THE WORLD

Protecting Canada's wild species supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 11, Sustainable Cities and Communities; SDG 14, Life below Water; and SDG 15, Life on Land. It also supports specific SDG targets, as well as other international agreements and initiatives.

Work under this goal supports progress toward the 2020 Biodiversity Goals and Targets for Canada and the global conservation objectives of the United Nations Convention on Biological Diversity—in particular, by ensuring that needed recovery strategies and management plans are in place and that appropriate collaborative action is taken on priority places, species and threats, and by helping to prevent and mitigate impacts from invasive alien species.

For details on how this goal supports international action, see Annex 3.

#### #NATUREFORALL

**#NatureForAll** is a global movement to inspire love, support, and action for conservation that is co-led by Parks Canada. It is driven by a coalition of more than 350 partner organizations worldwide, with more than 50 being Canadian. These organizations know that the more people care about wildlife, the more likely they are to take action to support protection, conservation and restoration of species and their habitat. They are working together to share best practices and lessons learned so that successful programming can be replicated and scaled up in Canada and globally. Programmes like Bioblitz, Shoreline Cleanup, and Conservation Volunteers, are getting Canadians out into nature where they can learn about and discover their personal connection with the natural world and become empowered to take conservation into their own hands.

### OUR PARTNERS

All Canadian jurisdictions share responsibility for conserving wildlife species. Federal, provincial and territorial governments work collaboratively for the protection of species at risk, and many provinces and territories have put in place their own species at risk legislation. In particular, provinces and territories lead in protecting terrestrial species on provincial, territorial and private land and share responsibility with Canada on protecting freshwater aquatic species. Meanwhile, the federal government leads on aquatic species, migratory birds and species on federal land.

A number of provinces and territories have also established biodiversity strategies and policies, as well as other initiatives that support biodiversity and species conservation, such as:

- ♦ wetland conservation policies
- ♦ protected area strategies

- ♦ initiatives to prevent, eradicate and control invasive alien species
- ♦ participation in the General Status of Species in Canada program (wild species reports)

Indigenous peoples play a key role in conserving wildlife species and their habitat. For example, they contribute to the implementation of the *Species at Risk Act* through:

- ♦ the National Aboriginal Council on Species at Risk, which advises the Minister of Environment and Climate Change on administering the *Species at Risk Act*
- ♦ the Aboriginal Traditional Knowledge Subcommittee on Species at Risk, which facilitates access to the best available Indigenous Traditional Knowledge and the integration of that knowledge into the Committee on the Status of Endangered Wildlife in Canada status assessment process

Indigenous peoples are also engaged in on-the-ground conservation and ecological monitoring in regions across Canada. The Indigenous Guardians program facilitates opportunities to protect sensitive areas and species.

Because action to protect wildlife species and their habitats can also cross international boundaries, we also collaborate with other countries. For example, to protect migratory birds, Canada partners with the US and Mexico to implement the North American Waterfowl Management Plan and the North American Bird Conservation Initiative. Similarly, Canada partners on Atlantic salmon through the Canada North Atlantic Salmon Conservation Organization, while tunas are managed internationally through the International Commission on the Conservation of Atlantic Tunas.

## TAKE ACTION!

- Learn about wildlife and biodiversity by, for example, visiting a national wildlife area, migratory bird sanctuary, or national, provincial or territorial park
- Take action to protect species at risk and their habitat, and where needed seek support through programs such as the [Habitat Stewardship Program](#) or [Aboriginal Fund for Species at Risk](#)
- Abide by laws and regulations that are in place to protect wildlife, such as the [Species at Risk Act](#) and the [Migratory Birds Convention Act, 1994](#)
- [Volunteer with Parks Canada](#)
- Donate ecologically sensitive land to charities or governments through the [Ecological Gifts Program](#)
- Reduce your personal impact on the environment by reducing energy use and waste
- Limit consumption of products that could easily enter the natural environment, such as single-use plastics
- Consider tinting or applying a patterned film to windows in your home or business; this helps birds see the windows and avoid collisions
- Ensure that the bait you are using is neither an invasive species that could damage the ecosystem, nor a species at risk



### PARTNERS TAKING ACTION

#### FRIENDS OF THE CARP RIVER

Friends of the Carp River are a group of volunteers who work with landowners, recreational users, government agencies, and businesses to improve the quality of the Carp River. Their objective is to ensure that all actions, including plans for development, lead to improvement in the quality of life in and along the Carp River and its watershed for the mutual benefit of its human and wildlife communities. The Friends are working with the Mississippi Valley Conservation Authority to make a recently restored 2-kilometre section of the river into a living classroom, which will educate and engage students, families and visitors in a wetland discovery experience.



Photo: © Janet Mason

### PARTNERS TAKING ACTION

#### THE FATAL LIGHT AWARENESS PROGRAM (FLAP)

[FLAP](#) was born 25 years ago out of a desire to prevent night-migrating birds from flying into the lights shining from office towers. Through community engagement, and thanks to their network of devoted volunteers, FLAP Canada has accumulated invaluable data on the bird/building collision issue both during the day and night. Through strong partnerships, they are developing municipal and national standards and policies for the lighting of office towers, and helping to create effective bird-collision deterrent solutions.

### PARTNERS TAKING ACTION

#### THE NORTH AMERICAN BREEDING BIRD SURVEY

The [North American Breeding Bird Survey](#) is the primary source of long-term, large-scale population data for over 400 breeding bird species. It is coordinated in Canada by Environment and Climate Change Canada's Canadian Wildlife Service, in the United States by the US Geological Survey, and in Mexico by the National Commission for Knowledge and Use of Biodiversity. Conducted since 1966, this standardized roadside survey relies on hundreds of volunteers' participation. These data are carefully analyzed on a yearly basis to provide information on bird population trends, relative abundance and species composition and richness at the local, regional and continental scale.

### PARTNERS TAKING ACTION

#### LAC SIMON, KITCISAKIK AND LONG POINT FIRST NATIONS

The [Algonquin First Nations of Lac Simon, Kitcisakik, and Long Point](#) have reached an agreement to implement multi-year conservation measures for the Val d'Or population of Woodland Caribou, boreal population (boreal caribou). Val d'Or is one of 6 ranges of boreal caribou found in Quebec but is isolated from other populations in the province. The population currently consists of an estimated 18 individuals, produces 1 to 3 calves each year and is considered not self-sustaining. This agreement includes measures to decrease habitat fragmentation, such as reforestation and road closures, as well as other measures to support boreal caribou recovery including predator control, monitoring, research and the inclusion of Indigenous Traditional Knowledge.





# CLEAN DRINKING WATER



## LONG-TERM GOAL

**All Canadians have access to safe drinking water and, in particular, the significant challenges Indigenous communities face are addressed**

## WHY IS THIS ISSUE IMPORTANT?

Clean drinking water is a fundamental human need, and helping to ensure that all Canadians have clean water to drink is a federal government priority. Providing safe drinking water requires a great deal of knowledge and coordination among multiple stakeholders, including governments, businesses and individuals across Canada.

## MEDIUM-TERM TARGET

- By March 31, 2021, all of the long-term drinking water advisories on public systems on reserve are to be resolved

## SHORT-TERM MILESTONE

- By 2021, 100% of planned new or updated Guidelines for Canadian Drinking Water Quality will have been published in the Canada Gazette

## RESPONSIBLE MINISTER/ KEY DEPARTMENTS AND AGENCIES

Minister of Indigenous Services/ Health Canada;  
Indigenous Services Canada; Public Health Agency  
of Canada; Statistics Canada

## CANADA'S STARTING POINT

- To measure the extent to which drinking water advisories reflect drinking water contamination (as opposed to precautionary action in response to problems with drinking water equipment or processes), we track boil water advisories and their causes. In 2017, based on a subset of Canadian jurisdictions, 83% of advisories were issued as a precaution.
- As a measure of access to safe drinking water, Indigenous Services Canada tracks the number of long-term drinking water advisories affecting public water systems on reserve. In November 2015, Indigenous Services Canada established a baseline of 105 long-term drinking water advisories on these systems. Since then, the number of long-term drinking water advisories has declined from 105 to 58 as of April 1, 2019.

## OUR ACTION PLAN

### KEY PRIORITIES

- In support of our commitment to end all long-term drinking water advisories on public systems on reserve by March 2021, we have invested over \$2 billion since 2016 to significantly improve water and wastewater infrastructure on reserve, ensure the proper operation and maintenance of systems, enhance the monitoring and testing of on reserve water and wastewater, and support the training of water and wastewater system operators. Public reporting on progress is available in real-time.
- To ensure that communities that have had drinking water advisories lifted continue to have reliable access to safe, clean drinking water, Budget 2019 proposed an additional investment of \$739 million over 5 years, starting in 2019–2020, for First Nation communities to operate and maintain their public drinking water systems.

## CONTRIBUTING ACTIONS

To ensure all Canadians have access to safe drinking water, we will:

### Work with partners on drinking water quality

Work with provinces and territories to develop and update the Guidelines for Canadian Drinking Water Quality.

Work in partnership with First Nation communities, including First Nations technical advisors and leaders to support sustainable First-Nations-led approaches to ensuring that on-reserve water systems are safe.

### Take action to help ensure safe drinking water

Provide health-based guidance to provinces and territories on drinking water contaminants, including through the development of drinking water screening values.

Provide funding and advice to First Nations in the planning, procurement, design, construction, operation and maintenance, and commissioning of their water and wastewater facilities.

Conduct potable water inspections and/or audits on international and interprovincial aircraft, trains, cruise ships and ferries to protect the health and safety of the travelling public, ensuring that critical violations are mitigated in a timely manner.

## CONNECTIONS WITH OTHER FSDS AREAS



Ensuring safe drinking water for all Canadians supports FSDS targets related to healthy and sustainable communities and is enabled by action to address climate change, support green infrastructure and ensure healthy lakes and rivers:

- climate change impacts such as rainfall changes and floods can cause water shortages and contamination—we need to consider these impacts and take action to adapt
- investing in water infrastructure is essential for ensuring clean and safe drinking water, while investing in wastewater infrastructure helps protect sources of drinking water from pollution

- lakes, rivers and groundwater are important sources of drinking water for Canadians, while water stewardship and management and conservation of wetlands can help protect drinking water supplies from contamination
- sustainable agricultural practices can enhance the quality of water running off or draining from agricultural land, helping to protect sources of drinking water

## CANADA IN THE WORLD

Ensuring safe drinking water for all Canadians supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 3, Good Health and Well-being, and SDG 6, Clean Water and Sanitation. It also supports specific SDG targets, as well as other international agreements and initiatives.

For details on how this goal supports international action, see Annex 3.

## OUR PARTNERS

Provinces and territories work closely with us to establish and update the [Guidelines for Canadian Drinking Water Quality](#)—which form the foundation for drinking water quality standards across Canada—and implement them in accordance with their priorities for protecting public health.

The responsibility for safe drinking water quality in First Nations communities is a shared responsibility between First Nations and the Government of Canada. First Nations are owners of their water and wastewater systems and are responsible for its daily operation and management activities including planning, design, procurement, construction, and maintenance of their on-reserve water and wastewater infrastructure.

When a potential concern about drinking water quality is identified, First Nation partners or an Environmental Health Officer employed by the Government of Canada will provide a recommendation to the Chief and Council for action. In First Nation communities, the Chief and Council issue and rescind drinking water advisories.

Indigenous Services Canada has partnered with other federal departments and agencies to facilitate the sharing of information and best practices relating to water and wastewater in First Nations in order to leverage the collective expertise and resources of partners. Although the immediate goal is to meet our long-term drinking water advisory commitment, longer-term activities are being undertaken to support the ultimate vision of greater self-determination and autonomy for First Nations.

## TAKE ACTION!

- Small steps to make your drinking water safer at home:
- only use cold tap water for drinking and food preparation
- if you have a well, have the water tested regularly and understand the care and maintenance required to protect your well from contamination
- dispose of toxic wastes, such as paints and used oils, in appropriate places



### PARTNERS TAKING ACTION

#### FEDERAL DEPARTMENTS WORKING TOGETHER TO CREATE EDUCATIONAL TOOLS

As part of the Interdepartmental Working Group on Drinking Water, several federal departments have worked together to develop the e-learning course [Water Quality 101: Potable Water Micro-System Fundamentals](#) as a comprehensive introduction to water quality in general with focus on the provision of potable water for micro-systems (very small systems providing drinking water for up to and including 25 people). In addition to being an essential tool for federal departments, this publicly available course is now being used by several provinces to train their own drinking water operators.



# SUSTAINABLE FOOD



## LONG-TERM GOAL

**Innovation and ingenuity contribute to a world-leading agricultural sector and food economy for the benefit of all Canadians**

### WHY IS THIS ISSUE IMPORTANT?

Canada's food system, including agriculture, aquaculture, fisheries and food and beverage processing, provides safe and healthy food for Canadians, helps ensure long-term food security, and is an important part of our economy. In 2016, the agriculture and agri-food system generated \$110 billion, or close to 7% of Canada's GDP, and employed 2.3 million Canadians. Strengthening the agriculture and agri-food sector includes finding innovative ways to respond and adapt to new and emerging issues, and seizing new value-added market opportunities to ensure sustainable growth.

Our food is harvested on farmlands, caught in oceans and freshwater systems, hunted and gathered in the wilderness, or grown in our homes and communities. Protecting our environment, including freshwater and soil quality, will help ensure our food systems continue to feed Canadians and create jobs over the long term. New digital technologies will play a key role, enabling producers to provide more and healthier food with less environmental impact.

We also need to ensure that all Canadians, including those in isolated northern communities, have access to nutritious food. For Indigenous peoples, this includes traditional or country food as well as store-bought food. Indigenous peoples have unique considerations relative to food systems, and much higher rates of food insecurity compared to the general Canadian population. Recognition and support for self-determination of Indigenous peoples with respect to their food systems including traditional food, as one example of advancing reconciliation through a nation-to-nation relationship with Indigenous peoples, based on recognition of rights, respect, cooperation and partnership.

Food waste is another important issue for Canada's food system. According to the Food and Agriculture Organization of the United Nations, food waste accounts for nearly 8% of worldwide greenhouse gas emissions, stemming largely from the decomposition of food waste in landfills. In 2016 and again in 2018, G20 agricultural ministers highlighted food loss and waste as a global problem of enormous economic, environmental, and societal significance, and recognized that prevention strategies will help to meet the United Nations 2030 Agenda for Sustainable Development Goal 12, Responsible Consumption and Production.

### MEDIUM-TERM TARGETS

- ♦ By 2030, support improvement in the environmental performance of the agriculture sector by achieving a score of 71 or higher for the Index of Agri-Environmental Sustainability (reflecting the quality of water, soil, air and biodiversity)
- ♦ Achieve 90% compliance with *Fisheries Act* regulations related to aquaculture
- ♦ Grow Canada's agri-food exports to \$75 billion per year by 2025

### SHORT-TERM MILESTONES

- ♦ By 2020, launch a food policy that supports the achievement of interdependent social, environmental and economic outcomes, including improved access to safe and healthy food for all Canadians
- ♦ By 2020, articulate and implement the Framework for Aquaculture Risk Management
- ♦ Implement the Healthy Eating Strategy to help counter diet-related chronic disease burden in Canada
- ♦ By October 15, 2022, all requirements of the *Safe Food for Canadians Regulations* will be phased in
- ♦ Update the Organic production systems standard (revised in 2015) by 2020
- ♦ Update the Organic aquaculture standard (developed in 2012) by the end of 2019

### RESPONSIBLE MINISTERS/KEY DEPARTMENTS AND AGENCIES

Minister of Agriculture and Agri-Food; Minister of Fisheries, Oceans and the Canadian Coast Guard/ Agriculture and Agri-Food Canada; Canada Border Services Agency; Canadian Food Inspection Agency; Canadian Northern Economic Development Agency; Crown-Indigenous Relations and Northern Affairs Canada; Environment and Climate Change Canada; Health Canada; Indigenous Services Canada; Innovation, Science and Economic Development Canada; Fisheries and Oceans Canada; Public Services and Procurement Canada

## OUR ACTION PLAN

### KEY PRIORITIES

- In support of our sustainable agriculture target, we will continue to enhance the competitiveness and resiliency of the agriculture sector through the implementation of the Canadian Agricultural Partnership, which came into effect in April 2018. The Partnership is a 5-year, \$3 billion investment by federal, provincial and territorial governments to strengthen the agriculture, agri-food and agri-based products sector and enhance competitiveness while helping farmers adapt to climate change, conserve water and soil resources, and grow their businesses to meet increasing global food demand sustainably. It sets clear objectives with a focus on:
  - growing trade and expanding markets
  - the innovative and sustainable growth of the sector
  - supporting diversity and a dynamic, evolving sector
- In support of our sustainable agriculture target, on February 2019 we announced the Canadian Agricultural Strategic Priorities Program. It is a \$10 million per year program that over 5 years will provide non-repayable contribution funding to facilitate the agricultural sector's ability to address emerging issues and capitalize on opportunities. It will focus on 4 priority areas:
  - adoption of new technology
  - environmental sustainability
  - strategic development and capacity building
  - emerging issues
- In support of our sustainable aquaculture target, we will move forward with a suite of initiatives to ensure that Canada's aquaculture sector is economically successful and environmentally sustainable, including:
  - beginning to develop a federal *Aquaculture Act*
  - creating a single comprehensive set of regulations, the General Aquaculture Regulations
  - moving toward an area-based approach to aquaculture management
  - developing a framework for aquaculture risk management based on the precautionary approach
- In support of our agri-food export target, we have launched an Export Diversification Strategy to increase Canadian exports by helping Canadian businesses access new markets.
- In support of our Sustainable Food goal, Budget 2019 proposed to provide an additional \$100 million over 5 years, starting in 2019–2020, from the Strategic Innovation Fund to support innovation in the food processing sector. Launched in 2017, the fund attracts and supports high-quality and innovative business investment across the country.
- In support of our Sustainable Food goal, we have committed to modernizing regulatory frameworks that impede innovation and growth in agri-food and aquaculture, without compromising Canada's strong health, safety, and environmental protections.
- In support of our Sustainable Food goal, we will continue to advance the Agri-Food Economic Strategy Table. Made up of industry representatives, the Table was established in 2017 to identify sector-specific challenges, propose ambitious targets, and outline an actionable plan to realize those targets, which provide bold recommendations to both government and industry.
- In support of our Sustainable Food goal, Budget 2019 proposed to provide \$15 million over 5 years for the Northern Isolated Community Food initiative to improve food systems in the North. In the context of the Food Policy for Canada, this initiative will increase food security in a culturally appropriate manner.
- In support of our Sustainable Food goal, Canada is working with the US and Mexico through the Commission for Environmental Cooperation to implement the North American Initiative on Food Waste Reduction and Recovery, a collaborative effort that explores opportunities to reduce and recover food waste in North America.

## CANADA'S STARTING POINT

- ♦ To measure the extent to which agriculture in Canada is managed sustainably, we track indicators which assess the quality of water, soil, air and biodiversity. Going forward, we will track our progress using the new Index of Agri-Environmental Sustainability which reflects all 4 areas. The baseline for this combined indicator is 65, which is based on 2011 data. Our aspiration is to achieve a score of 71 or higher by 2030.
- ♦ To measure the extent to which aquaculture in Canada is managed sustainably, we track aquaculture operators' compliance with *Fisheries Act* regulations. In previous years, compliance was assessed on the basis of formal charges laid against aquaculture operators. In 2015 and 2016, compliance based on charges laid was 100%. Going forward, progress toward our target will be assessed on the basis of violations detected during site inspections (including those of lower severity where no formal charges are laid). This method provides a more complete picture of industry compliance with aquaculture regulations and standards. Compliance based on violations detected was 85.1% in 2015 and 86.9% in 2016.
- ♦ To measure the agriculture and agri-food sector's contribution to Canada's economic growth, we track the percentage change of agri-food products sold. A target has been set of 4.5% change annually between 2017 and 2025.
- ♦ To gain insight into the relationship between food consumption and health, we track aspects of Canadians' dietary consumption patterns, the levels of key nutrients in the food supply, and factors in the food environment that influence consumer behaviour. We also track rates of obesity and diet-related chronic diseases in Canada, such as type 2 diabetes, high blood pressure, and heart disease. The economic burden of chronic diseases affected by diet and other modifiable risk factors is estimated at \$26.7 billion annually in 2008 (adjusted to 2017 dollars).

## CONTRIBUTING ACTIONS

To ensure Canadians have safe, secure and sustainable food systems, we will:

### Use legislation and regulations to ensure sustainable aquaculture

Develop and implement regulations under the [Fisheries Act](#) to advance aquaculture sustainability. This will include:

- ♦ implementing a monitoring program under the *Aquaculture Activities Regulations* to ensure the use of drugs and pesticides in aquaculture does not significantly harm freshwater and marine environments, and annually publishing data collected under the *Aquaculture Activities Regulations* for finfish, freshwater and shellfish operations

- ♦ developing a single set of aquaculture regulations which would bring more clarity for industry, stakeholders and the Canadian public about how aquaculture is managed for responsible growth in Canada
- ♦ begin developing a new federal act that would continue to ensure that Canada's aquaculture industry is a global leader in producing high-quality products in an environmentally sustainable way

### Increase knowledge supporting sustainable agriculture, fisheries and aquaculture

Conduct research on the environmental effects of agriculture and aquaculture and ways these sectors can help the environment (for example, by storing carbon).

Conduct targeted regulatory research on fish pests and pathogens, ecosystem management and interactions with wild fish populations, as well as collaborative research to improve environmental decision making and sustainability of the aquaculture industry.

### Promote innovation and secure our position as a preferred agri-food supplier to high-value markets

Promote innovation and encourage the adoption of sustainable agricultural practices at farm and landscape levels by working with provinces and territories through the Canadian Agricultural Partnership. The Partnership builds on the success of previous policy frameworks and provides a continued focus on environmental sustainability, including climate change mitigation and adaption. It includes:

- ♦ disseminating research and providing new technologies to the sector at an accelerated pace
- ♦ promoting the advancement and adoption of agricultural clean technologies
- ♦ supporting agricultural research in emerging and transformative areas

Support the development of a world-leading, innovative Canadian agri-food sector, including by:

- ♦ supporting the [Agri-Food Economic Strategy Table](#)
- ♦ through [Innovation Canada](#), providing a single point of contact that connects Canadian businesses and innovators in all sectors, including the agri-food sector, to government programs and services
- ♦ advancing the [Protein Industries Canada Supercluster](#)
- ♦ advancing the science clusters (for example, wheat, organic and pork) under the Canadian Agricultural Partnership's Agri-Science program

### Provide a food subsidy

Continue to provide a subsidy, including through Nutrition North Canada, to increase access to perishable, nutritious food for Northerners living in isolated communities.

### Make healthier food choices easier

Continue to implement the multi-year comprehensive [Healthy Eating Strategy](#) to support food environments that make healthier food choices easier for all Canadians. This includes improving the nutritional quality of food, protecting vulnerable populations through restrictions on food and beverage advertising marketed to children under 13 years of age, and providing nutritional information through an updated Canada's Food Guide and improved food labelling to better meet the needs of Canadians. As an integral part of the Strategy, the new Food Guide also promotes food literacy and skills that can support healthy eating, safe food handling and help reduce food waste.

Implement program improvements to Nutrition North Canada as one way to support increased access to and availability of nutritious foods in isolated northern communities.

### Use legislation and regulations to ensure safe food

Implement the new *Safe Food for Canadians Regulations*, a major step forward in safeguarding Canada's food system and enhancing the health and well-being of consumers. The regulations include new requirements related to licensing, traceability of food products, and preventive controls. Requirements are being phased in over 12 to 30 months.

Under the authority of the *Food and Drugs Act and Regulations* continue to implement food safety and nutritional quality regulations and standards for all foods sold in Canada.

### Work with partners to address invasive alien species

Protect Canada's agricultural sector and natural spaces by working with partners to prevent invasive alien species from being introduced into Canada and limiting their spread. For example, work with the US and other countries to ensure compliance with Canadian phytosanitary regulations and share information on best practices and compliance rates.

### CONNECTIONS WITH OTHER FSDS AREAS



Ensuring sustainable food supports FSDS targets related to climate action, healthy wildlife, clean water, clean growth and sustainable communities:

- ◆ sustainable agricultural practices can increase carbon sequestration in soil, protect water quality and help maintain wildlife habitat capacity
- ◆ sustainable fisheries, including aquaculture, contribute to healthy freshwater and marine ecosystems
- ◆ access to safe and healthy food helps communities flourish
- ◆ investing in clean technology helps sectors such as agriculture, fisheries and aquaculture become more sustainable and competitive



#### TAKE ACTION!

- Use Canada's Food Guide to make healthier food choices and gain food skills
- Reduce food waste (and save money) by planning meals and buying what you need, storing perishable foods properly, and using up leftovers
- Learn how to use best before dates to avoid throwing out food that is safe to eat
- Reduce your trips to the grocery store by starting your own vegetable garden or finding a nearby community garden
- Donate extra non-perishable food to your local food banks if you don't think you'll consume it by the best before date

## CANADA IN THE WORLD

Canada is supplying sustainably-produced food to both Canada and the world. Ensuring sustainable food supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 2, Zero Hunger; SDG 12, Responsible Consumption and Production; SDG 14, Life Below Water; and SDG 15, Life on Land. It also supports specific SDG targets, as well as other international agreements and initiatives.

Work under this goal supports progress towards the 2020 Biodiversity Goals and Targets for Canada and the global conservation objectives of the United Nations Convention on Biological Diversity—in particular, by maintaining or improving the level of biodiversity and wildlife habitat capacity on agricultural lands, and maintaining or improving water and soil quality.

For details on how this goal supports international action, see Annex 3.

## OUR PARTNERS

Agriculture is an area of shared jurisdiction and provinces and territories have a joint role to play in promoting a sustainable food system. For example, they deliver programming that encourages farm-level environmental stewardship and are primarily responsible for water management.

Aquaculture management is also a shared responsibility. We collaborate with other governments through the Canadian Council of Fisheries and Aquaculture Ministers and will continue to work with interested Indigenous nations to identify potential aquaculture opportunities.

Communities and non-governmental organizations are active in helping to build sustainable food systems in Canada. For example, cities such as Toronto and Vancouver have launched food strategies that include measures to increase access to affordable and healthy food. Non-governmental organizations also contribute—for example, by collecting surplus food and distributing it to those who need it.

Canada's fishers and agricultural producers are responding to environmental challenges by adopting innovative technologies and practices to produce food while reducing impacts on the climate, water, soil and biodiversity. Farmers and ranchers are using integrated pest management approaches to reduce reliance on pesticides, keeping carbon sequestered in soil by decreasing tilling, and reducing greenhouse gas emissions from livestock through approaches such as changing the feed that animals eat.

Finally, the Protein Industries Canada supercluster, funded by Innovation, Science and Economic Development Canada's Innovation Superclusters Initiative and matched dollar for dollar by industry, brings together industry, academia and not-for-profit organizations that are partnering to make Canada a leading source for plant proteins and address the demand for protein by emerging markets.

### PARTNERS TAKING ACTION FEEDBACK

Restaurant owners have prepared food and ingredients that they simply throw away if they can't sell enough before close. This results in a lot of food waste. To tackle that issue, 2 cousins from Toronto have developed a mobile application to reduce waste in restaurants. Their app, [Feedback](#), allows users to get access to time-sensitive deals during off-peak and end of day hours so that they can buy food, that might otherwise be discarded, at a steeply reduced price.



Photo: © Joshua Walters

### PARTNERS TAKING ACTION WALMART CANADA'S ZERO FOOD WASTE COMMITMENT

Walmart Canada has committed to zero food waste in its Canadian operations by 2025. To reach this goal, the company has implemented a 3-part Strategy that includes increasing food donations, providing philanthropic support, and improving operational efficiencies while enhancing value to the customer. This includes discounting repackaged bruised or peak-freshness produce through Walmart's \$1/\$2 Bag Program. To address the issue of food waste and food insecurity more broadly, the Walmart Foundation has granted \$19 million to Canadian organizations engaged in research and innovative initiatives aimed at reducing food waste in Canada.



# CONNECTING CANADIANS WITH NATURE



## LONG-TERM GOAL

**Canadians are informed about the value of nature, experience nature first hand, and actively engage in its stewardship**

## WHY IS THIS ISSUE IMPORTANT?

Connecting with nature benefits Canadians, their communities and the environment. Spending time in nature can improve physical and mental health and support children's development, while nature-based tourism provides economic benefits for Canada. Getting out and experiencing nature also inspires Canadians to help protect it.

Canadians are already passionate about nature and are taking action to protect it. Twenty-five million people visit Canada's national parks, national historic sites and national marine conservation areas each year, while others connect with nature by visiting green spaces in their communities or by participating in nature-based activities like hiking, horseback riding or gardening. Many also take action to protect the environment.

We can support Canadians by expanding opportunities to experience nature and get involved in conservation, and by enabling children to connect with nature from a young age to lay the foundation for a life-long practice.

## CANADA'S NATURE LEGACY

**Funding through Canada's Nature Legacy supports our Connecting Canadians with Nature goal. It will expand opportunities for Canadians to get involved in conservation, support the establishment of new protected and conserved areas, and will increase access for Canadians to protected areas where they can connect and establish relationships with nature. It will also support the integration of Indigenous views, history and heritage into national parks, marine conservation areas and historic sites.**

## MEDIUM-TERM TARGET

- By 2020, maintain or increase the number of Canadians that get out into nature—for example, by visiting parks and green spaces—and increase participation in biodiversity conservation activities relative to a 2010 baseline

## SHORT-TERM MILESTONES

- Between 2019 and 2022, maintain or increase visitation to federal protected areas such as selected national wildlife areas, national parks and national marine conservation areas while maintaining the ecological values, integrity and benefits to biodiversity conservation of these places
- Between 2019 and 2022, continue to increase visitation to national historic sites

## RESPONSIBLE MINISTERS/KEY DEPARTMENTS AND AGENCIES

Minister of Environment and Climate Change/  
Environment and Climate Change Canada; Jacques Cartier and Champlain Bridges Incorporated; Parks Canada

## CANADA'S STARTING POINT

- To measure the extent to which Canadians are getting out in nature, we track the percentage of Canadian households who visit nearby parks and public green spaces and the number of visitors to federal protected areas such as national parks, national marine conservation areas and selected national wildlife areas:
  - in 2017, 87% of Canadian households reported that they had a park or green space within a 10-minute journey of their home
  - in 2017, 85% of Canadian households reported that they visited a park or green space close to their home during the year, while 71% reported that they visited a park or green space that was not close to their home
  - visits to federal protected areas are increasing—in 2017–2018, visits to national parks and marine conservation areas were up 34% from 2010–2011
- To measure the extent to which Canadians are participating in conservation, we track the percentage of Canadian households who report that they take definite action to protect the environment. In 2017, 18% of Canadian households engaged in unpaid activities aimed at conservation or protecting the environment or wildlife.

## CONTRIBUTING ACTIONS

To provide opportunities for Canadians to connect with nature, we will:

### Build capacity for conservation activities

Engage Canadians in stewardship activities to protect and conserve natural space and wildlife species and their habitat by:

- ♦ working collaboratively with Indigenous peoples on a wide range of Indigenous protected and conserved areas
- ♦ recovering species at risk on a priority basis, including through Parks Canada's Conservation and Restoration Program
- ♦ developing strategic partnerships for collaborative activities such as scientific and academic research, conservation efforts, promotional campaigns and outreach activities
- ♦ supporting national programming aimed at educating and engaging children aged 6 to 12 in Canadian wildlife conservation

### Promote public participation

Encourage Canadians to visit their national parks and historic places, experience the outdoors and learn more about our environment and history. For example:

- ♦ provide opportunities for Canadians to connect with nature through learning, outreach and multi-media initiatives in their communities, and by offering free admission to Parks Canada places for children 17 and under
- ♦ work with partners to facilitate specific opportunities for youth, young adults and new Canadians to learn about, experience, and share their encounters with Parks Canada and its network of places
- ♦ continue efforts to increase participation in nature-based programs and visitation to national wildlife areas
- ♦ support the development of green space in urban areas to increase opportunities for residents to connect with nature

## OUR ACTION PLAN

### KEY PRIORITIES

- In support of our target, we will take action to ensure that current and future generations of Canadians have opportunities to experience and connect with nature. For example:
  - Budget 2018 announced a historic investment of \$1.3 billion over 5 years to protect Canada's ecosystems, landscapes and biodiversity between 2018 and 2023, including \$500 million toward the Canada Nature Fund
  - investments in Budget 2018 will support the integration of Indigenous views, history and heritage into national parks, marine conservation areas and historic sites

## Conserve Canada's biodiversity

Conserve Canada's biodiversity through the Canada Nature Fund. The fund will provide federal funding of \$500 million over 5 years and will seek to leverage an additional \$500 million in contributions from partners such as provinces, territories, Indigenous communities, philanthropic foundations, private sector companies and non-governmental organizations. It will support provinces, territories, Indigenous peoples and stakeholders in conserving natural areas and helping species at risk recover.

## Enhance programs and services for visitors

Foster a connection to nature and culture by expanding and enhancing programs and services that meet the needs of visitors to Parks Canada administered places and facilitate positive and memorable experiences. This includes:

- ♦ diversifying accommodation and interpretation programming to encourage exploration and learning
- ♦ continuing to innovate, expand and diversify available programs and services and expand the [Learn-to Camp Program](#)
- ♦ working with Indigenous communities to provide interpretive and storytelling programs rooted in traditional activities and knowledge
- ♦ continuing to renew infrastructure that facilitates visitor access to and use of heritage places

## CONNECTIONS WITH OTHER FSDS AREAS



FSDS targets related to lands, forests, and wildlife, as well as healthy and sustainable communities, help Canadians connect with nature:

- ♦ connecting with nature can inspire Canadians to help conserve ecosystems and species
- ♦ protecting lands and forests, as well as coasts and oceans, provides opportunities for Canadians to connect with nature and helps build healthy and sustainable communities

## CANADA IN THE WORLD

Helping Canadians connect with nature supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 11, Sustainable Cities and Communities; and SDG 12, Responsible Consumption and Production. It also supports specific SDG targets, as well as other international agreements and initiatives.

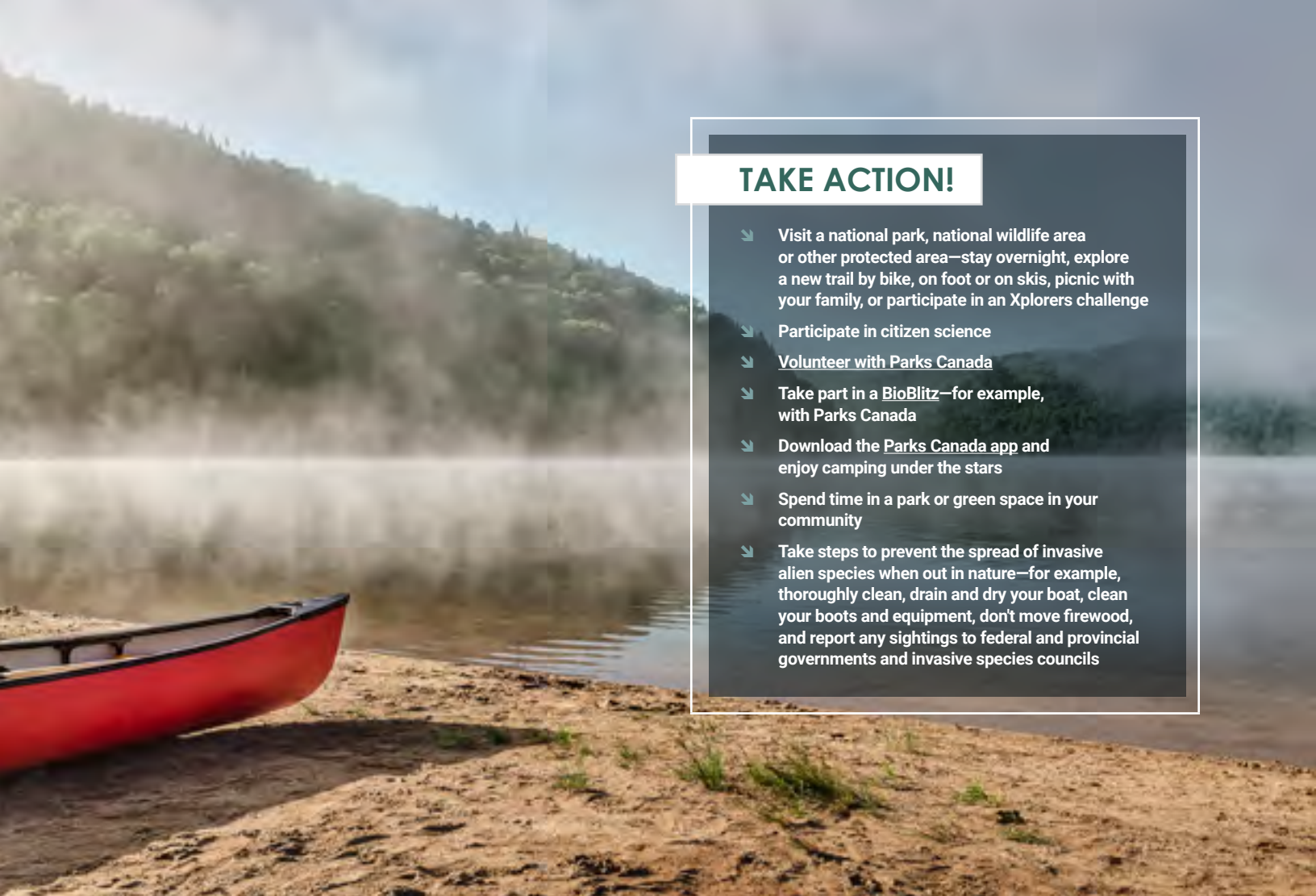
Work under this goal supports progress toward the 2020 Biodiversity Goals and Targets for Canada and the global conservation objectives of the United Nations Convention on Biological Diversity—in particular, by encouraging Canadians to get out into nature and get involved in biodiversity conservation activities.

For details on how this goal supports international action, see Annex 3.

## OUR PARTNERS

Provinces, territories and municipalities, as well as Indigenous and non-governmental organizations, help get Canadians into nature and involved in conservation. For example:

- ♦ provincial and territorial parks and protected areas provide opportunities for activities such as camping, hiking and viewing wildlife
- ♦ Indigenous peoples work with federal, provincial and territorial governments to establish, manage and present protected areas
- ♦ municipal parks and green spaces help urban Canadians benefit from time in nature
- ♦ non-governmental organizations and educational institutions engage Canadians in citizen science initiatives to track changes in the environment and biodiversity



## TAKE ACTION!

- Visit a national park, national wildlife area or other protected area—stay overnight, explore a new trail by bike, on foot or on skis, picnic with your family, or participate in an Xplorers challenge
- Participate in citizen science
- [Volunteer with Parks Canada](#)
- Take part in a BioBlitz—for example, with Parks Canada
- Download the [Parks Canada app](#) and enjoy camping under the stars
- Spend time in a park or green space in your community
- Take steps to prevent the spread of invasive alien species when out in nature—for example, thoroughly clean, drain and dry your boat, clean your boots and equipment, don't move firewood, and report any sightings to federal and provincial governments and invasive species councils

### PARTNERS TAKING ACTION RESPONSIBLE TOURISM

In 2017, British Columbia's [Thompson Okanagan](#) was recognized by the Responsible Tourism Institute as the first Biosphere-certified sustainable destination in the Americas. The Thompson Okanagan offers diverse visitor experiences and encourages tourism that supports its cultural and natural heritage.

### PARTNERS TAKING ACTION ROUGE NATIONAL URBAN PARK

[Rouge National Urban Park](#), the first of its kind in Canada, is the result of years of collaboration with stakeholders. Located in the Greater Toronto area, it will be one of the largest and best protected urban parks of its kind in the world. The park is home to incredible biodiversity, beaches, hiking, the City of Toronto's only campground, and some of Canada's oldest known Indigenous sites. Parks Canada works with partners such as park farmers, conservation groups, Indigenous peoples and community associations to manage the park and offer year-round programming for visitors.







# SAFE AND HEALTHY COMMUNITIES



## LONG-TERM GOAL

**All Canadians live in clean, sustainable communities that contribute to their health and well-being**

### WHY IS THIS ISSUE IMPORTANT?

We are committed to ensuring Canadians live in clean, safe environments that contribute to their health and well-being. Among other measures, this means improving air quality, protecting Canadians from harmful substances, and preventing environmental emergencies or mitigating their impacts if they do occur.

#### CLIMATE CHANGE IMPACTS IN CANADIAN COMMUNITIES

Climate change is already affecting Canadians and their communities. Extreme weather events like floods, wildfires, droughts, and high temperatures are costly and can impact our health, safety and well-being. Taking action now to prepare for expected impacts will help to protect Canadians and build safe, healthy and sustainable communities:

- see [Effective Action on Climate Change](#) to learn how we're supporting adaptation projects and helping Canadians make informed decisions to protect themselves and their families
- see [Modern and Resilient Infrastructure](#) to learn how we're making Canada's infrastructure more resilient

Air pollution can affect health even at low levels, especially for children, the elderly and those with health conditions. It also affects the environment and results in economic costs due to lost productivity, increased need for medical care, and impaired quality of life. About 14 400 premature deaths in Canada each year can be linked to human-caused air pollution such as car exhaust and industrial emissions. And about 30% of Canadians live in areas where air quality does not meet national standards.

While chemicals are part of our everyday lives and provide many benefits, some can be harmful if not properly managed. Managing these substances, as well as assessing and remediating contaminated sites, protects human health and the environment, and benefits Canada's economy.

#### SUSTAINABLE INDIGENOUS COMMUNITIES

Indigenous and northern communities face challenges such as managing the impacts of a changing climate, addressing the high and often fluctuating costs of energy, and promoting sustainable development that balances environmental, social, cultural and economic well-being.

Indigenous and northern communities in Canada are particularly susceptible to these challenges due to factors such as remoteness and inaccessibility, cold climate, aging and inefficient infrastructure, and reliance on diesel for electricity generation and space heating.

Actions across our strategy will help to support sustainable Indigenous communities, including:

- continuing to support First Nation communities in preparing for and responding to emergencies
- building resilience in the North and Indigenous communities
- providing funding to First Nation communities to improve water and wastewater infrastructure and waste management on reserve
- helping Indigenous and northern communities reduce their reliance on diesel for heat and electricity
- continuing to deliver the Nutrition North Canada subsidy, aimed at alleviating high food costs in the North

#### MEDIUM-TERM TARGETS

- ◆ Increase the percentage of Canadians living in areas where air quality standards are achieved from 70% in 2015 to 85% in 2030
- ◆ Continued decrease in emissions from 1990 of fine particulate matter, nitrogen oxides, sulphur oxides and volatile organic compounds from all sources
- ◆ By 2022, take risk management actions in a timely manner for 100% of substances found to be a risk to the environment or human health

## SHORT-TERM MILESTONES

- ♦ Review of the Canadian Ambient Air Quality Standard for ozone is complete and a new standard is expected to be announced by summer 2019. The review of the Canadian Ambient Air Quality Standards for fine particulate matter is underway and updated standards are expected to be finalized in 2021.
- ♦ By 2021, fully implement the updated National Environmental Health Public Outreach Strategy to help Canadians, including vulnerable populations, take action to prevent risks from chemical substances in their homes
- ♦ By 2021, address (scientifically review or assess) the approximately 4 300 substances identified as priorities for action under the Chemicals Management Plan
- ♦ By 2020, complete the re-evaluation of remaining legacy pesticides

## RESPONSIBLE MINISTERS/KEY DEPARTMENTS AND AGENCIES

Minister of Environment and Climate Change; Minister of Health/ Crown-Indigenous Relations and Northern Affairs Canada; Canada Border Services Agency; Environment and Climate Change Canada; Fisheries and Oceans Canada; Health Canada; Indigenous Services Canada; Jacques Cartier and Champlain Bridges Incorporated; National Defence; National Research Council Canada; Natural Resources Canada; Parks Canada; Public Safety Canada; Public Services and Procurement Canada; Standards Council of Canada; Statistics Canada; Transport Canada

## CANADA'S STARTING POINT

- ♦ To measure changes in air quality, we track emissions of key air pollutants and monitor outdoor air quality. Emissions of most key air pollutants decreased substantially between 1990 and 2016, including fine particulate matter (18% lower in 2016 than 1990), sulphur oxides (65% lower), nitrogen oxides (25%), volatile organic compounds (42%) and carbon monoxide (54%).
- ♦ We also track the percentage of Canadians living in areas where the Canadian Ambient Air Quality Standards are met—approximately 70% in 2013 to 2015.
- ♦ To measure the adverse effects of air pollution, we estimate the percentage of deaths in Canada each year, excluding death from injuries, that is due to exposure to ground-level ozone and fine particulate matter emitted from human sources. The most recent estimates show that 2% of deaths can be attributed to ground-level ozone exposure (1984 to 2012) and 0.8% to fine particulate matter exposure (2001 to 2012).
- ♦ To measure environmental and health risks from harmful substances, we track levels of key substances in Canadians' blood and urine, as well as in the environment:
  - ♦ between 2007 to 2009 and 2014 to 2015 there was a significant decreasing trend in the average concentration of blood lead (26% reduction), BPA in urine marginally decreased, and there was no significant trend in the average concentration of blood cadmium or mercury
  - ♦ the concentration of polybrominated diphenyl ethers (PBDEs) in fish exceeds the Federal Environmental Quality Guidelines, while the concentration of perfluorooctane sulfonate (PFOS) in fish exceeds guidelines for fish as diet for wildlife predators
- ♦ We also track emissions of harmful substances to air as well as releases to water. Between 1990 and 2016, mercury, lead and cadmium emissions to air were reduced by 88%, 87% and 91%, respectively. Releases of mercury, lead and cadmium to water were 63%, 62% and 50% lower, respectively, in 2016 than in 2003.
- ♦ To measure our progress in implementing the Federal Contaminated Sites Action Plan (FCSAP), we track the number of sites for which remediation activities have been completed. Between 2005 and 2018, 1 020 federal contaminated sites were remediated under FCSAP. In total more than 16 000 sites on the Federal Contaminated Sites Inventory have been closed, including 6 600 funded under FCSAP, either because remediation was complete or because no action was identified as necessary during assessment.

## OUR ACTION PLAN

### KEY PRIORITIES

- In support of our Chemicals Management Plan target, we will continue to implement the third phase of the Chemicals Management Plan, which will address about 1 550 remaining priority chemicals (of the original approximately 4 300) and to assess new substances as they are introduced in Canada and, where required, put controls in place within legislated timelines
- In support of our air quality and emissions targets, we will continue to implement the [Air Quality Management System](#), the [Multi-Sector Air Pollutants Regulations](#), and corresponding non-regulatory instruments to significantly reduce air emissions that contribute to smog and acid rain
- In support of our Safe and Healthy Communities goal, we will continue to remediate federal contaminated sites under the [Federal Contaminated Sites Action Plan](#)
- In support of our Safe and Healthy Communities goal, Budget 2019 proposed to provide \$49.9 million over 15 years (\$2.2 billion on a cash basis), starting in 2020–2021, to create the Northern Abandoned Mine Reclamation Program. The program aims to clean up abandoned mines that pose risks to the environment.
- In support of our Safe and Healthy Communities goal, we will continue to monitor emissions and atmospheric data to measure the effectiveness of actions to manage levels of harmful substances in the environment.

### CONTRIBUTING ACTIONS

To protect Canadian and build healthy communities, we will:

#### Better understand air pollutants and harmful substances

Conduct scientific research and analysis to better quantify emissions and understand the sources and effects of outdoor and indoor air pollutants and chemical substances. These activities will focus on:

- ♦ better understanding and managing the health risks to Canadians
- ♦ assessing the benefits and co-benefits for the environment and human health of existing, planned and proposed measures to reduce emissions
- ♦ identifying emerging pollutants and emissions sources of concern, and where the impacts are likely to occur
- ♦ identifying and addressing the effects of air pollution on ecosystems and wildlife
- ♦ tracking harmful substances in the environment, including contaminant levels in the North through the [Northern Contaminants Program](#)

#### Provide information to inform action and decision making

Provide information to help Canadians reduce their exposure to harmful substances and air pollutants. For example:

- ♦ help Canadians understand air quality in their area through the [Air Quality Health Index](#) and the [State of the Air website](#)
- ♦ inform Canadians about releases and disposals of pollutants in their communities through the [National Pollutant Release Inventory](#)
- ♦ support decision making by federal custodians of contaminated sites
- ♦ provide the [Residential Air Quality Guidelines](#) to inform Canadians about health effects of indoor air contaminants as well as sources, recommended exposure limits and recommendations to reduce exposure
- ♦ provide information on testing for [indoor radon](#) and actions to reduce radon levels where necessary
- ♦ assist provinces and territories by developing the Environmental Quality Guidelines, national benchmarks or indicators of environmental quality intended to protect, sustain and enhance Canada's environment

#### Use legislation and regulations to address outdoor air pollutant emissions and harmful substances

Develop and implement regulations and non-regulatory instruments to limit emissions of air pollutants, including:

- ♦ nitrogen oxides
- ♦ sulphur dioxide
- ♦ particulate matter
- ♦ volatile organic compounds

Manage harmful substances which pose risks, ensure risk management measures are in place for substances identified as harmful, make it easier for organizations to report data, and carry out compliance promotion and enforcement activities.

Work with provinces and territories to minimize and reduce emissions of ozone-depleting substances and alternatives through the [National Action Plan for the Environmental Control of Ozone-Depleting Substances and their Halocarbon Alternatives](#).

### **Work with partners on outdoor air quality and chemicals management**

Work with provinces, territories and other stakeholders to address air quality through implementation of the Air Quality Management System, which includes ambient air quality standards, base-level industrial emission requirements, provincial air zones and federally managed air sheds, as well as reporting to Canadians.

Participate in joint initiatives to manage risks posed by harmful substances to nature and water, and work with domestic and international partners through programs such as Computers for Schools and [reBOOT Canada](#) which help reduce the environmental impact of electronic waste.

Provide leadership and expertise to World Health Organization initiatives on chemicals management and air pollution awareness and reduction strategies.

### **Take a leading role in international agreements and collaboration on chemicals management and transboundary air pollution**

Negotiate on behalf of Canada and implement international agreements related to chemicals management.

Leverage international collaboration to support harmonized regulatory approaches.

Negotiate on behalf of Canada and implement and strengthen agreements to reduce transboundary air pollution. For example, work with the US through the Canada-US Air Quality Agreement and with the US and other countries through the Convention on Long-Range Transboundary Air Pollution.

Seek to include provisions in Canada's free trade agreements that support Canada's leadership role on chemicals management and air quality.

### **Demonstrate leadership on assessing and remediating contaminated sites**

Assess and remediate federal contaminated sites through the Federal Contaminated Sites Action Plan and the Northern Abandoned Mine Reclamation Program.

### **Prevent environmental emergencies or mitigate their impacts**

Collaborate with provinces, territories and other partners to protect Canadians and their environment from the effects of emergency pollution incidents by providing science-based expert advice and regulations.

Continue to support provincial and territorial disaster relief and recovery efforts in the wake of large-scale natural disasters through the Disaster Financial Assistance Arrangements Program.

## **CONNECTIONS WITH OTHER FSDS AREAS**



Building safe and healthy communities is linked to FSDS targets on climate action, protecting habitats, and supporting vulnerable people and sectors:

- ♦ investing in green and climate-resilient infrastructure can help protect communities from climate impacts and reduce air pollutant emissions
- ♦ clean technology can reduce air pollutant emissions
- ♦ expanding opportunities to connect with nature helps build healthy and sustainable communities
- ♦ managing risks from harmful substances helps prevent them from polluting lakes, rivers, coasts and oceans
- ♦ access to safe and healthy food helps communities flourish
- ♦ reducing greenhouse gas emissions and supporting adaptation can prevent negative impacts on the health and well-being of Canadians as well as on air quality

## **CANADA IN THE WORLD**

Building safe and healthy communities supports the 2030 Agenda and its global Sustainable Development Goals—in particular SDG 2, Zero Hunger; SDG 3, Good Health and Well-being; SDG 9, Industry, Innovation and Infrastructure; SDG 11, Sustainable Cities and Communities; SDG 12, Responsible Consumption and Production; SDG 13, Climate Action; and SDG 15, Life on Land. It also supports specific SDG targets, as well as other international agreements and initiatives.

For details on how this goal supports international action, see Annex 3.

## OUR PARTNERS

Provinces and territories are taking action to protect Canadian communities from air pollutants and other harmful substances. For example, under the Air Quality Management System, they are working to reduce air pollutant emissions and keep ambient air pollutant levels below the Canadian Ambient Air Quality Standards. They have also agreed to report on a regular basis on air quality within local air zones and through the State of Air Report.

Provincial and territorial governments also establish legislation and regulations that prohibit pollution, address waste, and set requirements and standards for remediating contaminated sites outside federal lands. For example, [\*Ontario's Resource Recovery and Circular Economy Act\*](#) aims to divert more waste from landfills, including by encouraging innovation in recycling processes and requiring producers to take responsibility for their products and packaging.

Municipalities are key partners as well—their decisions related to public transit, waste management, buildings, and other areas have a significant impact on air pollution, as well as Canadians' quality of life.

## TAKE ACTION!

- Check the [National Pollutant Release Inventory](#) to learn about pollution in your community
- Keep an eye on the [Air Quality Health Index](#), especially in summer
- Take special precautions if there is a wildfire near your community
- Keep gas-, oil- and wood-burning stoves, heaters and appliances in good condition and ensure they meet standards and codes when applicable
- Buy products that are low in, or free from, volatile organic compounds
- Plant trees to increase the urban forest canopy, provide shade, and improve air quality
- [Learn more](#) about chemical substances, what we are doing, and what you can do
- Always read and follow the label when using household chemicals
- Always dispose of household chemicals and pharmaceuticals according to municipal guidelines or through a take back program
- Use our [fuel consumption ratings search tool](#) to identify the most fuel-efficient conventional vehicle that meets your needs



## PARTNERS TAKING ACTION

### CLIMATE TELLING

The [ClimateTelling web portal](#) was established to create awareness about climate change and the impact on human health facing Indigenous communities in Canada. It provides resources and tools for Indigenous communities interested in undertaking climate change and health-related initiatives. It also provides a platform for sharing knowledge, expertise and experiences and supports collaboration between scholars, professionals and community advocates. The portal was developed with support from Indigenous Services Canada's [Climate Change and Health Adaptation Program](#).

## PARTNERS TAKING ACTION

### FOOD SECURITY VULNERABILITY ASSESSMENT RELATED TO PERMAFROST DEGRADATION

The community of Jean Marie River, Northwest Territories, is deeply concerned by the impacts of climate change on their people's traditional lands and the activities that they support. In collaboration with the [Northern Climate ExChange](#), they have conducted 2 vulnerability assessments of permafrost thaw and its impact on the community and traditional activities, including impacts on food security. Using both scientific and traditional knowledge, the community has created a map of thaw-sensitive areas. This map is a practical tool for decision-makers and allows the community to better adapt around permafrost hazards. Jean Marie River's project is now being expanded to include 2 additional traditional harvest areas.

## PARTNERS TAKING ACTION

### MONTREAL'S PATH TO SUSTAINABLE DEVELOPMENT

With support from the government of Québec, the Ville de Montreal partnered with the Conseil des industries durables and Ellio, to develop the [Parcours Développement Durable Montréal](#). Through training and mentoring, the partnership supports local private and social economy businesses, including female entrepreneurs participating in the Women4Climate international mentoring program, in understanding how to create and implement innovative and inspiring sustainable business models based on sustainable development principles. The program is an important element in support of Montreal's transition to a responsible, green and circular economy and will continue until 2021 for a total of 75 businesses.

## PARTNERS TAKING ACTION

### SUSTANE TECHNOLOGIES: ADVANCED RECYCLING

In Canada, it costs roughly \$50-\$150 per tonne to put waste into a landfill. Halifax-based Sustane Technologies Inc. is using clean technology to convert municipal solid waste destined for the landfill into clean fuel products and recyclable materials. A possible solution to the global waste problem, Sustane's technology also involves the conversion of low-grade plastic waste into fuel for internal and commercial use. The company will generate enough process heat to power its new commercial operations in Chester, Nova Scotia, so it will be as environmentally and cost efficient as possible. This innovation lessens the environmental footprint of waste, provides many new jobs and creates significant export opportunities. This project was developed with support from the Atlantic Canada Opportunities Agency.



# ANNEX 1: ABOUT THE FEDERAL SUSTAINABLE DEVELOPMENT STRATEGY

The Federal Sustainable Development Strategy (FSDS) sets out our sustainable development priorities, establishes goals and targets, and identifies actions to achieve them. Actions to implement the FSDS will also support the environmentally-focused Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda for Sustainable Development.

## LEGISLATIVE BASIS

The [\*Federal Sustainable Development Act\*](#) (the Act) establishes the requirement to table the FSDS. The Act's purpose is to provide the legal framework for developing and implementing an FSDS that will make environmental decision making more transparent and accountable to Parliament. The Act requires the Minister of Environment and Climate Change to table a whole-of-government FSDS at least once every 3 years.

[\*An Act to amend the Federal Sustainable Development Act\*](#) received Royal Assent in February 2019 and will come into force on a future date to be determined by the Governor in Council. Once the amendments are in force, future strategies will be guided by more effective, inclusive, and accountable strategies.

## THE ROLE OF DEPARTMENTS AND AGENCIES

Environment and Climate Change Canada has a key role in implementing the Act. It houses the Sustainable Development Office (SDO), which is responsible for developing and maintaining systems and procedures to monitor progress on implementation of the FSDS, and for preparing FSDS Progress Reports at least once every 3 years. The SDO also coordinates the development of the strategy.

Because sustainable development goes beyond the environment, it cuts across many departmental and agency mandates. The Act reflects this, requiring agencies named in its schedule and departments named in Schedule I to the *Financial Administration Act* to prepare sustainable development strategies that comply with and contribute to the FSDS.

The role of departments and agencies also includes:

- ♦ working collaboratively with Environment and Climate Change Canada to develop the FSDS
- ♦ integrating environmental and sustainable development considerations into policy, plan and program development through strategic environmental assessments
- ♦ preparing sustainable development strategies containing objectives and plans within their mandate that contribute to the FSDS

## THE ROLE OF PUBLIC CONSULTATION

Public consultation is an important part of FSDS development under the Act. Each draft FSDS must undergo a public consultation period of at least 120 days before it is finalized. As part of public consultation, the Minister of Environment and Climate Change provides the draft FSDS to:

- ♦ the Commissioner of the Environment and Sustainable Development
- ♦ the Sustainable Development Advisory Council (a multi-stakeholder advisory body consisting of at least 1 representative from each province and territory and 3 from each of the following: Indigenous peoples, environmental non-governmental organizations, business organizations, and organizations representative of labour)
- ♦ the appropriate committee of each House of Parliament
- ♦ the public

Consultation results inform the final strategy and are summarized in a publicly-available synthesis report.

## THE STRUCTURE OF THE FSDS

The 2019–2022 FSDS is organized around 13 aspirational goals that are a Canadian reflection of the SDGs (See Annex 3 – Canada in the World), acknowledging our unique responsibilities and circumstances:



**EFFECTIVE ACTION ON CLIMATE CHANGE**  
A low-carbon economy contributes to limiting global average temperature rise to well below 2 degrees Celsius and supports efforts to limit the increase to 1.5 degrees Celsius



**GREENING GOVERNMENT**  
The Government of Canada will transition to low-carbon, climate-resilient, and green operations



**CLEAN GROWTH**  
A growing clean technology industry in Canada contributes to clean growth and the transition to a low-carbon economy



**MODERN AND RESILIENT INFRASTRUCTURE**  
Modern, sustainable, and resilient infrastructure supports clean economic growth and social inclusion



**CLEAN ENERGY**  
All Canadians have access to affordable, reliable and sustainable energy



**HEALTHY COASTS AND OCEANS**  
Coasts and oceans support healthy, resilient and productive ecosystems



**PRISTINE LAKES AND RIVERS**  
Clean and healthy lakes and rivers support economic prosperity and the well-being of Canadians



**SUSTAINABLY MANAGED LANDS AND FORESTS**  
Lands and forests support biodiversity and provide a variety of ecosystem services for generations to come



**HEALTHY WILDLIFE POPULATIONS**  
All species have healthy and viable populations



**CLEAN DRINKING WATER**  
All Canadians have access to safe drinking water and, in particular, the significant challenges Indigenous communities face are addressed



**SUSTAINABLE FOOD**  
Innovation and ingenuity contribute to a world-leading agricultural sector and food economy for the benefit of all Canadians



**CONNECTING CANADIANS WITH NATURE**  
Canadians are informed about the value of nature, experience nature first hand, and actively engage in its stewardship



**SAFE AND HEALTHY COMMUNITIES**  
All Canadians live in clean, sustainable communities that contribute to their health and well-being

## FSDS goals:

- ◆ are aspirational
- ◆ take a long-term view
- ◆ address important challenges and problems
- ◆ remain attuned to environmental information, data and indicators
- ◆ encourage flexibility in the choice of strategies for achievement
- ◆ reflect domestic and international priorities and commitments

One or more targets contribute to each goal.

To the extent possible, targets are intended to:

- ◆ be measurable, meaning that it should be clear how progress will be measured, and targets should be supported by indicators that accurately represent what is being measured and that allow for comparison over time
- ◆ be time-bound, meaning that they should include clear time frames and specify what is required by when
- ◆ take a medium-term view, meaning 3 to 5 years
- ◆ fall within federal jurisdiction and departmental mandates
- ◆ be consistent with Government of Canada priorities
- ◆ reflect the principles set out in the *Federal Sustainable Development Act*

Short-term milestones complement FSDS targets. They represent interim steps that will help ensure we stay on track to achieve our longer-term objectives. In general, short-term milestones should be achievable within one 3-year FSDS cycle.

Action plans, which constitute implementation strategies as required by the Act, set out what we will do to achieve our medium-term targets and aspirational goals. They include priority measures, as well as other actions that support the goals and targets. Action plans should:

- ◆ be clear, meaning they should be written in plain language, well-defined and understandable
- ◆ be relevant, meaning they should have a clear connection to one or more targets or to a goal
- ◆ reflect actions the Government of Canada is taking or plans to take during the 3-year FSDS cycle (recognizing that actions may cover part of the 3-year cycle or may extend beyond it)

Action plans as set out in the FSDS are complemented by specific commitments set out in departmental sustainable development strategies. Departmental strategies, which must be tabled within one year of the FSDS, will include actions and performance measures that contribute to FSDS action plans.

While provinces and territories, Indigenous peoples, businesses, the scientific community, non-governmental organizations and Canadian citizens contribute to achieving environmental outcomes and achieving the SDGs of the 2030 Agenda, only federal actions are included in FSDS action plans.

# ANNEX 2: PERFORMANCE MEASUREMENT

Performance measurement is an essential part of our sustainable development approach. We track and report on sustainable development actions and results through:

- ♦ Federal Sustainable Development Strategy (FSDS) progress reports
- ♦ reporting on departmental sustainable development strategies (DSDSs)
- ♦ the Canadian Environmental Sustainability Indicators (CESI)

## FSDS PROGRESS REPORTS

The *Federal Sustainable Development Act* requires us to prepare an FSDS progress report at least once every 3 years. Progress reports will let you know how we are implementing the FSDS and how quickly we are making progress toward its goals and targets. Beginning with the 2018 progress report, we use a simple dashboard approach to ensure that our reports are clear and accessible.

While FSDS progress reports provide important information on environmental outcomes, it is important to note that responsibility for the environment is shared, and that we support environmental sustainability within the constraints of our jurisdiction and authorities. As a result, it can be difficult to directly link federal actions to environmental outcomes.

## DEPARTMENTAL SUSTAINABLE DEVELOPMENT STRATEGIES

DSDSs provide detailed information on what departments and agencies are doing to help meet the aspirational goals through the targets and milestones set out in the FSDS. Over the next 3 years, taking into account your comments and ideas, participating departments and agencies will develop DSDSs that comply with and contribute to the FSDS.

DSDSs are linked with core departmental planning and reporting processes, and include:

- ♦ the department's sustainable development vision
- ♦ specific departmental sustainability commitments and actions
- ♦ performance indicators that show how departments are meeting their commitments
- ♦ information on departmental decision making and sustainable development practices, including implementation of strategic environmental assessments

Departments and agencies bound by the Act contribute differently to FSDS goals and targets depending on their mandate; however, all are responsible for contributing to our goal of greening government.

## INDICATORS

The indicators we will use to measure and report on our progress are largely drawn from the CESI program. The program selects indicators using the following criteria:

- ♦ policy relevance (represents the FSDS goals and targets)
- ♦ utility (meets the needs of decision makers and the public)
- ♦ soundness (provides consistent and solid methodology; comparable over time)
- ♦ data availability and integrity (uses existing high-quality data with adequate coverage)

The CESI program produces indicators with the support of programs within Environment and Climate Change Canada and other federal departments and agencies, including Health Canada, Statistics Canada, Natural Resources Canada, Parks Canada, Transport Canada and Fisheries and Oceans Canada, as well as provincial and territorial governments.

A wide range of indicators beyond those found in support of the FSDS is available through the [CESI website](#). Table 2 sets out the CESI indicators that will be used to track progress on the 2019-2022 FSDS, along with FSDS indicators from other sources.

TABLE 2 – INDICATORS FOR MEASURING PROGRESS ON THE 2019-2022 FSDS



TARGET TITLE	MEASURES OF PROGRESS TOWARD THE TARGET	UPDATE CYCLE	SOURCE	COMPLEMENTARY CONTEXTUAL INDICATORS SUPPORTING THE GOAL	UPDATE CYCLE	SOURCE
<div>EFFECTIVE ACTION ON CLIMATE CHANGE</div>						
Canada's greenhouse gas emissions	<a href="#">Greenhouse gas emissions</a>	Every year	CESI	<a href="#">Greenhouse gas intensity</a>	Every year	CESI
				<a href="#">Greenhouse gas emissions by economic sector</a>	Every year	CESI
Zero-emission vehicles	<a href="#">Percentage of new light-duty vehicles sales that are made up of zero-emission vehicles</a>	Every year	Transport Canada	<a href="#">Progress towards Canada's greenhouse gas emissions reduction target</a>	Every year	CESI
				<a href="#">Temperature change</a>	Every year	CESI
				<a href="#">Snow cover</a>	Every 2 years	CESI
				<a href="#">Arctic sea ice</a>	Every 2 years	CESI
				<a href="#">Adaptation on climate change survey</a>	Every 5 years	Natural Resources Canada
<div>GREENING GOVERNMENT</div>						
Greenhouse gas emissions reductions from federal buildings and fleets	<a href="#">Percentage change in energy related greenhouse gas emissions from facilities and fleets relative to fiscal year 2005 to 2006</a>	Every year	Centre for Greening Government (Treasury Board of Canada Secretariat)	<a href="#">Progress towards Canada's greenhouse gas emissions reduction target</a>	Every year	CESI
				<a href="#">Solid waste diversion and disposal</a>	Every year	CESI
Real property and fleet	Percentage of non-hazardous operational waste diverted from landfill	Every year	Centre for Greening Government (Treasury Board of Canada Secretariat)			
	Percentage of plastic waste diverted from landfill	Every year	Centre for Greening Government (Treasury Board of Canada Secretariat)			
	Percentage of construction, renovation and demolition waste diverted from landfill	Every year	Centre for Greening Government (Treasury Board of Canada Secretariat)			
	Percentage of the federal administrative fleet comprised of zero-emission vehicles	Every year	Centre for Greening Government (Treasury Board of Canada Secretariat)			
Adaptation to climate change	Percentage of departments that have developed measures to reduce climate change risks to assets, services and operations identified through departmental climate change risk assessment processes	Every year	Centre for Greening Government (Treasury Board of Canada Secretariat)			
Procurement	Percentage of purchased electricity from clean generation sources	Every year	Centre for Greening Government (Treasury Board of Canada Secretariat)			

TABLE 2 – INDICATORS FOR MEASURING PROGRESS ON THE 2019-2022 FSDS




TARGET TITLE	MEASURES OF PROGRESS TOWARD THE TARGET	UPDATE CYCLE	SOURCE	COMPLEMENTARY CONTEXTUAL INDICATORS SUPPORTING THE GOAL	UPDATE CYCLE	SOURCE
<div></div> <div>CLEAN GROWTH</div>						
Federal investment in clean energy research, development and demonstration	<a href="#">Clean energy investment tracking</a>	TBC	Natural Resources Canada	<a href="#">Clean tech sector jobs</a>	Every year	Statistics Canada
Clean technology exports	<a href="#">Value of clean technology exports</a>	Every year	Statistics Canada	<a href="#">Clean tech sector gross domestic product</a>	Every year	Statistics Canada
<div></div> <div>MODERN AND RESILIENT INFRASTRUCTURE</div>						
By the end of the 2027-2028 fiscal year, invest \$26.9 billion in funding for green infrastructure initiatives that reduce greenhouse gas emissions and improve climate resilience and environment	100% of funding available for projects under the green infrastructure stream of the <a href="#">Investing in Canada plan</a> has been allocated to projects	N/A	Infrastructure Canada	Value of green infrastructure projects approved under the Investing in Canada plan ( <a href="#">federal share</a> )	Every year	Infrastructure Canada
	Note: We have allocated \$26.9 billion under the green infrastructure stream of the Investing in Canada plan, a horizontal initiative delivered by 14 federal departments and agencies. A portion of the \$26.9 billion allocation will be used for administrative, operations and maintenance, and other program costs.			Percentage of municipalities that have integrated consideration of climate change impacts into their asset management planning and practices ( <a href="#">Core Public Infrastructure Survey</a> )	Every 2 years	Infrastructure Canada
				Percentage of communities across Canada with sustained boil water advisories per year ( <a href="#">Core Public Infrastructure Survey</a> )	Every 2 years	Infrastructure Canada
				Percentage of wastewater systems that are high, medium and low risk based on federal wastewater systems effluent regulations ( <a href="#">Core Public Infrastructure Survey</a> )	Every 2 years	Infrastructure Canada
				Percentage of municipalities who practice asset management ( <a href="#">Core Public Infrastructure Survey</a> )	Every 2 years	Infrastructure Canada
				Percentage of municipalities that strengthened their asset management practices as a result of federal funding through Infrastructure Canada	N/A	Infrastructure Canada
				Percentage of municipalities that built or enhanced their capacity to reduce greenhouse gas emissions and adapt to climate change as a result of federal funding through Infrastructure Canada	N/A	Infrastructure Canada
				Number of structural and/or natural assets with improved structural capacity to adapt to climate change, disaster, weather, etc.	N/A	Infrastructure Canada
<div></div> <div>CLEAN ENERGY</div>						
Clean power generation	<a href="#">Electricity generation from renewable sources</a>	Every year	Natural Resources Canada			
Energy efficiency	<a href="#">Energy efficiency</a>	Every year	Natural Resources Canada			

TABLE 2 – INDICATORS FOR MEASURING PROGRESS ON THE 2019-2022 FSDS









TARGET TITLE	MEASURES OF PROGRESS TOWARD THE TARGET	UPDATE CYCLE	SOURCE	COMPLEMENTARY CONTEXTUAL INDICATORS SUPPORTING THE GOAL	UPDATE CYCLE	SOURCE
<div>HEALTHY COASTS AND OCEANS</div>						
Marine conservation	<a href="#">Canada's conserved areas (marine)</a>	Every year	CESI	<a href="#">Shellfish harvest area quality</a>	Every 2 years	CESI
Sustainable fisheries	<a href="#">Sustainable fish harvest</a>	Every year	CESI	Eelgrass sites and trends	Every 3 years	CESI
				<a href="#">Status of major fish stocks</a>	Every year	CESI
				<a href="#">Marine pollution spills</a>	Every 3 years	CESI
				<a href="#">Monitoring disposal at sea</a>	Every 3 years	CESI
<div>PRISTINE LAKES AND RIVERS</div>						
Lake Erie	Phosphorus loading in Lake Erie	Every year	CESI	<a href="#">Phosphorus levels in the offshore waters of the Great Lakes</a>	Every 3 years	CESI
Lake Winnipeg Basin	<a href="#">Nutrients in Lake Winnipeg</a>	Every year for loading, every 2 years for levels	CESI	<a href="#">Nutrients in the St. Lawrence River</a>	Every 2 years	CESI
				<a href="#">Restoring the Great Lakes Areas of Concern</a>	Every year	CESI
				<a href="#">Water quality in Canadian rivers</a>	Every year	CESI
				<a href="#">Water quantity in Canadian rivers</a>	Every 2 years	CESI
				<a href="#">Metal mining effluent quality</a>	Every year	CESI
				<a href="#">Pulp and paper effluent quality</a>	Every year	CESI
<div>SUSTAINABLY MANAGED LANDS AND FORESTS</div>						
Terrestrial ecosystem conservation	<a href="#">Canada's conserved areas (terrestrial)</a>	Every year	CESI	<a href="#">Amount of Canadian forests; deforestation</a>	Every year	Natural Resources Canada
Health of national parks	<a href="#">Ecological integrity of national parks</a>	Every year	CESI	<a href="#">Forest regeneration</a>	Every year	Natural Resources Canada
Sustainable forests	<a href="#">Sustainability of timber harvest</a>	Every year	CESI			
				Land use change	Every 3 years	CESI
				<a href="#">Extent of Canada's wetlands</a>	Every 4 years	CESI
<div>HEALTHY WILDLIFE POPULATIONS</div>						
Species at risk	<a href="#">Species at risk population trends</a>	Every year	CESI	<a href="#">Changes in the status of wildlife species at risk</a>	Every year	CESI
	<a href="#">Status of wild species</a>	Every 5 years	CESI			
Migratory birds	<a href="#">Population status of Canada's migratory birds</a>	Every 3 years	CESI			
<div>CLEAN DRINKING WATER</div>						
Long-term drinking water advisories	<a href="#">Number of long-term drinking water advisories affecting First Nations drinking water systems</a>	Every year 3 years	CESI	<a href="#">Drinking water advisories in Canada</a>	Every 2 years	CESI

TABLE 2 – INDICATORS FOR MEASURING PROGRESS ON THE 2019-2022 FSDS

TARGET TITLE	MEASURES OF PROGRESS TOWARD THE TARGET	UPDATE CYCLE	SOURCE	COMPLEMENTARY CONTEXTUAL INDICATORS SUPPORTING THE GOAL	UPDATE CYCLE	SOURCE
<div></div> <div>SUSTAINABLE FOOD</div>						
Sustainable agriculture	<a href="#">Index of Agri-Environmental Sustainability</a>	Every 5 years	Agriculture and Agri-Food Canada	<a href="#">Environmental farm planning on agricultural land</a>	Every year	Agriculture and Agri-Food Canada
Sustainable aquaculture	<a href="#">Management of Canadian aquaculture</a>	Every year	CESI	<a href="#">Wildlife habitat capacity on agricultural land</a>	Every 2 years	CESI
Agri-food exports	<a href="#">Percentage change of agri-food products sold</a>	Every year	Agriculture and Agri-Food Canada	<a href="#">Rates of diet-related chronic diseases in Canada</a>	Every year	Statistics Canada
				<a href="#">Obesity rate in Canada</a>	Every year	Statistics Canada
<div></div> <div>CONNECTING CANADIANS WITH NATURE</div>						
Visitation to parks and participation in biodiversity conservation activities	<a href="#">Number of visits at Parks Canada natural heritage places</a>	Every year	Parks Canada	<a href="#">Trends in percentage of Canadians who report that they visited parks or public greenspaces</a>	Every 2 years	Statistics Canada
				Number of visits to selected national wildlife areas	Every year	Environment and Climate Change Canada
				<a href="#">Percentage of Canadians who report that they take definite action to protect the environment</a>	Every 2 years	Statistics Canada
<div></div> <div>SAFE AND HEALTHY COMMUNITIES</div>						
Air quality	Population exposure to outdoor air pollution	Every year	CESI	<a href="#">Air Health Trend Indicator</a>	Every 3 years	CESI
Chemicals Management Plan	<a href="#">Percentage of substances that are found to be toxic to the environment that have controls in place in a timely manner</a>	Every year	Environment and Climate Change Canada	<a href="#">Air quality</a>	Every year	CESI
				<a href="#">Human exposure to harmful substances</a>	Every 3 years	CESI
				<a href="#">PBDE in fish and sediment</a>	Every 3 years	CESI
	<a href="#">Percentage of actions taken in a timely manner to protect the health of Canadians from substances found to be a risk to human health</a>	Every year	Health Canada	<a href="#">PFOS in fish and water</a>	Every 3 years	CESI
				<a href="#">Release of harmful substances to water</a>	Every year	CESI
Air pollutant emissions	<a href="#">Air pollutant emissions</a>	Every year	CESI	<a href="#">Emissions of harmful substances to air</a>	Every year	CESI

# ANNEX 3: CANADA IN THE WORLD

Canada is not alone in taking action to protect the environment and improve our quality of life—sustainable development is a priority around the world. In addition to advancing our domestic priorities, the FSDS goals, targets and actions support the 2030 Agenda for Sustainable Development and its global Sustainable Development Goals (SDGs), as well as other international agreements and initiatives.

## SUPPORT FOR THE SUSTAINABLE DEVELOPMENT GOALS OF THE 2030 AGENDA

Our 13 FSDS goals are a reflection of the SDGs, with a focus on their environmental dimensions. Table 3 shows alignment between our strategy and the global SDGs, including direct linkages between FSDS and SDG targets.











TABLE 3 – ALIGNMENT BETWEEN FSDS GOALS AND THE SDGS			
FSDS GOALS	RELEVANT SDGS	FSDS TARGETS	RELEVANT SDG TARGETS
 <b>EFFECTIVE ACTION ON CLIMATE CHANGE</b>	        	<p>By 2030, reduce Canada's total greenhouse gas emissions by 30%, relative to 2005 emission levels</p>	<p>9.4 - By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities</p> <p>13.2 Integrate climate change measures into national policies, strategies and planning</p>
		<p>Zero-emission vehicles will represent 10% of new light-duty vehicle sales by 2025, 30% by 2030 and 100% by 2040</p>	<p>9.4 - By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities</p> <p>13.2 Integrate climate change measures into national policies, strategies and planning</p>

TABLE 3 – ALIGNMENT BETWEEN FSDS GOALS AND THE SDGS

FSDS GOALS	RELEVANT SDGS	FSDS TARGETS	RELEVANT SDG TARGETS
 GREENING GOVERNMENT	    	<p>Reduce greenhouse gas emissions from federal government facilities and fleets by 40% by 2030 (with an aspiration to achieve this target by 2025) and 80% below 2005 levels by 2050 (with an aspiration to be carbon neutral)</p>	<p>12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities</p> <p>13.2 Integrate climate change measures into national policies, strategies and planning</p>
		<p>Our administrative fleet will be comprised of at least 80% zero-emission vehicles by 2030</p>	<p>11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management</p> <p>12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities</p> <p>13.2 Integrate climate change measures into national policies, strategies and planning</p>
		<p>Divert at least 75% (by weight) of non-hazardous operational waste from landfills by 2030</p>	<p>12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse</p> <p>13.2 Integrate climate change measures into national policies, strategies and planning</p>
		<p>Divert at least 75% (by weight) of plastic waste from landfills by 2030</p>	<p>12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse</p> <p>13.2 Integrate climate change measures into national policies, strategies and planning</p>
		<p>Divert at least 90% (by weight) of all construction and demolition waste from landfills and strive to achieve 100% by 2030)</p>	<p>12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse</p> <p>13.2 Integrate climate change measures into national policies, strategies and planning</p>
		<p>By 2030, 75% of domestic office lease transactions must be carbon neutral in situations where the federal government represents 75% or greater of the occupied space (m2), market conditions permit and a competitive environment exists</p>	<p>12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities</p> <p>13.2 Integrate climate change measures into national policies, strategies and planning</p>
		<p>By 2022, By 2022, departments have developed measures to reduce climate change risks to assets, services and operations</p>	<p>11.b By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels</p> <p>13.2 Integrate climate change measures into national policies, strategies and planning</p>

TABLE 3 – ALIGNMENT BETWEEN FSDS GOALS AND THE SDGS

FSDS GOALS	RELEVANT SDGS	FSDS TARGETS	RELEVANT SDG TARGETS
 <b>GREENING GOVERNMENT</b>	    	<p>Use 100% clean electricity by 2025</p>	<p>7.2 By 2030, increase substantially the share of renewable energy in the global energy mix</p> <p>12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities</p> <p>13.2 Integrate climate change measures into national policies, strategies and planning</p>
 <b>CLEAN GROWTH</b>	   	<p>Implement our <a href="#">Mission Innovation</a> pledge to double federal government investments in clean energy research, development and demonstration from 2015 levels of \$387 million to \$775 million in 2020</p> <p>Increase the value of Canada's clean technology exports to \$15.6 billion by 2025</p>	<p>9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending</p> <p>9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending</p>
 <b>MODERN AND RESILIENT INFRASTRUCTURE</b>	   	<p>By the end of the 2027–2028 fiscal year, invest \$26.9 billion in funding for green infrastructure initiatives that reduce greenhouse gas emissions and improve climate resilience and environment quality</p>	<p>9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities</p>
 <b>CLEAN ENERGY</b>	  	<p>By 2030, 90% and in the long term, 100% of Canada's electricity is generated from renewable and non-emitting sources</p> <p>By 2030, 600 petajoules of total annual energy savings will be achieved as a result of adoption of energy efficiency codes, standards and practices from a baseline savings of 27.4 petajoules in 2017–2018</p>	<p>7.2 By 2030, increase substantially the share of renewable energy in the global energy mix</p> <p>7.3 By 2030, double the global rate of improvement in energy efficiency</p>

TABLE 3 – ALIGNMENT BETWEEN FSDS GOALS AND THE SDGS

















FSDS GOALS	RELEVANT SDGS	FSDS TARGETS	RELEVANT SDG TARGETS
 <p>HEALTHY COASTS AND OCEANS</p>	   	<p>By 2020, 10% of coastal and marine areas are conserved through networks of protected areas and other effective area-based conservation measures</p> <p>By 2020, all major fish and invertebrate stocks are managed and harvested at levels considered to be sustainable, from a baseline of 96% harvested within established ecosystem limits in 2016</p>	<p>14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans</p> <p>14.5 By 2020, conserve at least 10% of coastal and marine areas, consistent with national and international law and based on the best available scientific information</p> <p>14.4 By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics</p>
 <p>PRISTINE LAKES AND RIVERS</p>	     	<p>Achieve and maintain a 40% reduction in annual phosphorus loading into Lake Erie from a 2008 baseline to achieve the binational (Canada-US) phosphorus targets</p> <p>By 2022, reduce nutrient loadings in the Lake Winnipeg Basin by an estimated 44 700 kilograms per year in support of Manitoba's plan to reduce phosphorus in Lake Winnipeg by 50% to pre-1990 levels</p>	<p>6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally</p> <p>6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally</p>
 <p>SUSTAINABLY MANAGED LANDS AND FORESTS</p>	  	<p>By 2020, at least 17% of terrestrial areas and inland water are conserved through networks of protected areas and other effective area-based conservation measures</p> <p>By March 31 2023, ecological integrity will be maintained or improved in 92% of national park ecosystems</p> <p>Between now and 2022, maintain Canada's annual timber harvest at or below sustainable wood supply levels</p>	<p>15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements</p> <p>15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally</p> <p>15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally</p>

TABLE 3 – ALIGNMENT BETWEEN FSDS GOALS AND THE SDGS
























FSDS GOALS	RELEVANT SDGS	FSDS TARGETS	RELEVANT SDG TARGETS
 HEALTHY WILDLIFE POPULATIONS	  	<p>By 2020, populations of species at risk listed under federal law exhibit trends that are consistent with recovery strategies and management plans</p> <p>By 2025, increase the percentage of migratory bird species whose populations sizes fall within an acceptable range—neither too low nor too high—from a baseline of 57% in 2013</p>	<p>15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species</p> <p>15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species</p>
 CLEAN DRINKING WATER	 	<p>By 2021, all of the long-term drinking water advisories on public systems on reserve are to be resolved</p>	<p>6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all</p> <p>6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate</p> <p>6.B Support and strengthen the participation of local communities in improving water and sanitation management</p>
 SUSTAINABLE FOOD	   	<p>By 2030, support improvement in the environmental performance of the agriculture sector by achieving score of 71 or higher for the Index of Agri-Environmental Sustainability (reflecting the quality of water, soil, air and biodiversity)</p> <p>Achieve 90% compliance with <i>Fisheries Act</i> regulations related to aquaculture</p> <p>Grow Canada's agri-food exports to \$75 billion per year by 2025</p>	<p>2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality</p> <p>2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality</p> <p>2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality</p>
 CONNECTING CANADIANS WITH NATURE	 	<p>By 2020, maintain or increase the number of Canadians that get out into nature—for example, by visiting parks and green spaces—and increase participation in biodiversity conservation activities relative to a 2010 baseline</p>	<p>11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage</p> <p>11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities</p> <p>12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature</p>

TABLE 3 – ALIGNMENT BETWEEN FSDS GOALS AND THE SDGS

FSDS GOALS	RELEVANT SDGS	FSDS TARGETS	RELEVANT SDG TARGETS
 <p>SAFE AND HEALTHY COMMUNITIES</p>	      	<p>Increase the percentage of Canadians living in areas where air quality standards are achieved from 70% in 2015 to 85% in 2030</p>	<p>3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination</p> <p>11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management</p>
		<p>Continued decrease in emissions from 1990 of fine particulate matter, nitrogen oxides, sulphur oxides and volatile organic compounds from all sources</p>	<p>3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination</p> <p>11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management</p>
		<p>From 2019 to 2022, take risk management actions in a timely manner for 100% of substances found to be a risk to the environment or human health</p>	<p>3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination</p> <p>11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management</p>

## OTHER INTERNATIONAL AGREEMENTS AND INITIATIVES SUPPORTED BY FSDS GOALS, TARGETS AND ACTIONS

### Effective action on climate change

- ♦ [Arctic Council Framework for Action on Enhanced Black Carbon and Methane Emissions Reductions](#)
- ♦ [Canada-China Climate Change Working Group](#)
- ♦ [Climate and Clean Air Coalition](#)
- ♦ [Global Methane Initiative](#)
- ♦ [Intergovernmental Panel on Climate Change](#)
- ♦ [Montreal Protocol on Substances that Deplete the Ozone Layer](#)
- ♦ [North American Climate, Clean Energy and Environment Partnership](#)
- ♦ [North American Climate Leadership Dialogue](#)
- ♦ [North American Leaders' Summit](#)
- ♦ [North American Memorandum of Understanding Concerning Climate Change and Energy Collaboration](#)
- ♦ [Paris Agreement](#)
- ♦ [Paris Declaration on Carbon Markets in the Americas](#)
- ♦ [Powering Past Coal Alliance](#)
- ♦ [Sendai Framework for Disaster Risk Reduction 2015–2030](#)
- ♦ [United Nations Convention to Combat Desertification](#)
- ♦ [United Nations Framework Convention on Climate Change](#)

### Greening government

- ♦ [North American Climate, Clean Energy and Environment Partnership](#)

### Clean growth

- ♦ [Communiqué of the G7 Bologna Environment Ministers' Meeting, Annex: 5-year Bologna Roadmap on Resource Efficiency](#)
- ♦ [Communiqué of the G7 Toyama Environment Ministers' Meeting, Annex: Toyama Framework on Material Cycles](#)
- ♦ [G7 Alliance on Resource Efficiency](#)
- ♦ [Hamburg G20 Leaders' Declaration: G20 Resource Efficiency Dialogue](#)
- ♦ [Joint Declaration on Canada-China Clean Technology Cooperation](#)
- ♦ [Korea-Canada Memorandum of Understanding on Cooperation in Innovation and Energy Technologies](#)
- ♦ [Mission Innovation](#)
- ♦ [North American Memorandum of Understanding Concerning Climate Change and Energy Collaboration](#)
- ♦ [US-Canada Joint Statement on Climate, Energy and Arctic Leadership](#)

### Modern and resilient infrastructure

- ♦ [North American Memorandum of Understanding Concerning Climate Change and Energy Collaboration](#)
- ♦ [Paris Agreement](#)
- ♦ [Sendai Framework for Disaster Risk Reduction 2015–2030](#)
- ♦ [US-Canada Joint Statement on Climate, Energy and Arctic Leadership](#)

### Clean energy

- ♦ [Clean Energy, Education and Empowerment \(C3E or Women in Energy\) Initiative](#)
- ♦ [Mission Innovation](#)
- ♦ [North American Climate, Clean Energy and Environment Partnership](#)
- ♦ [Canada-Mexico Partnership](#)
- ♦ [Memoranda of Understanding between Canada and Argentina on energy efficiency, mining policy, and nuclear energy cooperation](#)
- ♦ [North American Memorandum of Understanding Concerning Climate Change and Energy Collaboration](#)
- ♦ [United Nations Framework Convention on Climate Change](#)

### Healthy coasts and oceans

- ♦ [1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter \(the London Protocol\)](#)
- ♦ [Canada-US Bilateral Agreement on Shellfish Sanitation](#)
- ♦ [Charlevoix Blueprint for Healthy Oceans, Seas and Resilient Coastal Communities: G7 Ocean Plastics Charter](#)
- ♦ [Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 \(London Convention\)](#)
- ♦ [Regional fisheries management organizations](#)
- ♦ [United Nations Convention on Biological Diversity and the related global and national biodiversity targets for 2020](#)
- ♦ [United Nations Convention on the Law of the Sea](#)
- ♦ [United Nations Global Partnership on Marine Litter](#)

### **Pristine lakes and rivers**

- ♦ [1971 Convention on Wetlands of International Importance \(Ramsar\)](#)
- ♦ [Canada-US Great Lakes Water Quality Agreement](#)
- ♦ [Great Lakes Fisheries Commission](#)
- ♦ [Treaty Relating to the Boundary Waters and Questions Arising Along the Border between the United States and Canada \(The Boundary Waters Treaty\)](#)
- ♦ [United Nations Convention on Biological Diversity and the related global and national biodiversity targets for 2020](#)

### **Sustainably managed lands and forests**

- ♦ [1971 Convention on Wetlands of International Importance \(Ramsar\)](#)
- ♦ [Arctic Council work on Conservation of Arctic Flora and Fauna](#)
- ♦ [Convention Concerning the Protection of the World Cultural and Natural Heritage](#)
- ♦ [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#)
- ♦ [Intergovernmental Platform on Biodiversity and Ecosystem Services](#)
- ♦ [Montreal Process Working Group on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests \(The Montreal Process\)](#)
- ♦ [North American Waterfowl Management Plan](#)
- ♦ [United Nations Convention on Biological Diversity and the related global and national biodiversity targets for 2020](#)

### **Healthy wildlife populations**

- ♦ [Agreement between the Government of Canada and the Government of the United States on the Conservation of the Porcupine Caribou Herd](#)
- ♦ [Agreement on the Conservation of Polar Bears](#)
- ♦ [Arctic Council work on Conservation of Arctic Flora and Fauna](#)
- ♦ [Convention for the Protection of Migratory Birds in the United States and Canada](#)
- ♦ [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#)
- ♦ [Memorandum of Understanding Between Environment Canada and the United States Department of the Interior for the Conservation and Management of Shared Polar Bear Populations](#)
- ♦ [North American Bird Conservation Initiative](#)
- ♦ [North American Waterfowl Management Plan](#)
- ♦ [Pacific Salmon Treaty](#)
- ♦ [Pan American Shorebird Program](#)
- ♦ [United Nations Convention on Biological Diversity and the related global and national biodiversity targets for 2020](#)

### **Initiatives under:**

- ♦ [International Commission on the Conservation of Atlantic Tunas](#)
- ♦ [Northwest Atlantic Fisheries Organization](#)
- ♦ [International Maritime Organization](#)
- ♦ [International Plan of Action for the Conservation and Management of Sharks](#)

### **Clean drinking water**

- ♦ [United Nations Declaration on the Rights of Indigenous Peoples](#)

### **Sustainable food**

- ♦ [Canada-US Bilateral Agreement on Shellfish Sanitation](#)
- ♦ [Food and Agriculture Organization of the United Nations](#)
- ♦ [International Treaty on Plant Genetic Resources for Food and Agriculture](#)
- ♦ [Pacific Salmon Treaty](#)
- ♦ [Regional fisheries management organizations](#)
- ♦ [Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade](#)
- ♦ [Stockholm Convention on Persistent Organic Pollutants](#)
- ♦ [United Nations Convention on Biological Diversity and the related global and national biodiversity targets for 2020](#)
- ♦ [United Nations Convention to Combat Desertification](#)
- ♦ [United Nations Declaration on the Rights of Indigenous Peoples](#)
- ♦ [United Nations Framework Convention on Climate Change](#)

### **Connecting Canadians with nature**

- ♦ [United Nations Convention on Biological Diversity and the related global and national biodiversity targets for 2020](#)

## Safe and healthy communities

- ♦ [1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter \(the London Protocol\)](#)
- ♦ [Agreement between the Government of Canada and the Government of the United States on Air Quality](#)
- ♦ [Agreement Between the Government of Canada and the Government of the United States Concerning the Transboundary Movement of Hazardous Waste](#)
- ♦ [Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal](#)
- ♦ [Canada-US Regulatory Cooperation Council – Regulatory Partnership Statement on Chemicals](#)
- ♦ [Clean Air and Climate Coalition initiative to address short-lived climate pollutants](#)
- ♦ [Canada-Australia cooperative arrangement on the Subject of Sharing Information on New Industrial Chemicals](#)
- ♦ [Intergovernmental Panel on Climate Change](#)
- ♦ [Memorandum of Understanding Between the European Chemicals Agency and Environment Canada/Health Canada](#)
- ♦ [Minamata Convention on Mercury](#)
- ♦ [Montreal Protocol on Substances that Deplete the Ozone Layer](#)
- ♦ [Organisation for Economic Cooperation and Development Decisions related to the Chemicals Programme](#)
- ♦ [North American Climate, Clean Energy and Environment Partnership](#)
- ♦ [North American Memorandum of Understanding Concerning Climate Change and Energy Collaboration](#)
- ♦ [Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade](#)
- ♦ [Stockholm Convention on Persistent Organic Pollutants](#)
- ♦ [Strategic Approach to International Chemicals Management](#)
- ♦ [United Nations Economic Commission for Europe Convention on Long-range Transboundary Air Pollution](#)
- ♦ [United Nations Economic Commission for Europe Protocol to Abate Acidification, Eutrophication, and Ground-level Ozone \(Gothenburg Protocol\)](#)
- ♦ [United Nations Economic Commission for Europe Protocol on Heavy Metals](#)
- ♦ [United Nations Economic Commission for Europe Protocol on Persistent Organic Pollutants](#)
- ♦ [United Nations Framework Convention on Climate Change](#)
- ♦ [Vienna Convention for the Protection of the Ozone Layer](#)
- ♦ [World Health Organization road map to address global air pollution health risks](#)

# ANNEX 4: DEPARTMENTS AND AGENCIES

The following departments and agencies are required to table sustainable development strategies under the *Federal Sustainable Development Act*:

- ♦ Agriculture and Agri-Food Canada
- ♦ Atlantic Canada Opportunities Agency
- ♦ Canada Border Services Agency
- ♦ Canada Economic Development for Quebec Regions
- ♦ Canada Revenue Agency
- ♦ Canadian Heritage
- ♦ Department of Finance Canada
- ♦ Department of Justice Canada
- ♦ Employment and Social Development Canada
- ♦ Environment and Climate Change Canada
- ♦ Fisheries and Oceans Canada
- ♦ Global Affairs Canada
- ♦ Health Canada
- ♦ Immigration, Refugees and Citizenship Canada
- ♦ Indigenous and Northern Affairs Canada  
(Indigenous Services Canada and Crown-Indigenous Relations and Northern Affairs Canada)
- ♦ Innovation, Science and Economic Development Canada
- ♦ National Defence
- ♦ Natural Resources Canada
- ♦ Parks Canada
- ♦ Public Health Agency of Canada
- ♦ Public Safety Canada
- ♦ Public Services and Procurement Canada
- ♦ Transport Canada
- ♦ Treasury Board of Canada Secretariat
- ♦ Veterans Affairs Canada
- ♦ Western Economic Diversification Canada

While not bound by the Act, the following organizations have contributed to the 2019 to 2022 Federal Sustainable Development Strategy:

- ♦ Canadian Coast Guard\*
- ♦ Canadian Environmental Assessment Agency
- ♦ Canadian Food Inspection Agency
- ♦ Canadian Institutes of Health Research
- ♦ Canadian Northern Economic Development Agency
- ♦ Correctional Service Canada
- ♦ Federal Economic Development Agency for Southern Ontario
- ♦ Federal Economic Development Initiative for Northern Ontario
- ♦ Infrastructure Canada
- ♦ Jacques Cartier and Champlain Bridges Incorporated
- ♦ National Capital Commission
- ♦ National Research Council Canada
- ♦ Royal Canadian Mounted Police
- ♦ Standards Council of Canada
- ♦ Statistics Canada
- ♦ Sustainable Development Technology Canada

\* The Canadian Coast Guard is included as part of Fisheries and Oceans Canada throughout the strategy.

# GLOSSARY OF TERMS

**Adaptation:** Adjusting our decisions, activities, and thinking because of observed or expected changes in climate, in order to reduce harm or take advantage of new opportunities

**Biodiversity:** The variability among living organisms from all sources including, among others, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems

**Clean energy:** Renewable and non-emitting (such as nuclear) energy sources, and carbon capture and storage technologies, as well as the reduction of energy usage through energy efficiency

**Clean technology:** Any process, product, or service that reduces environmental impacts (Statistics Canada)

**Country/traditional food:** Terms used in Canada to refer to foods gathered, hunted and fished by Indigenous peoples, especially in the Northern regions

**Ecological integrity:** A condition in which the natural components of an ecosystem—including physical elements, diversity of species and habitats, and ecological processes—are likely to persist

**Ecosystem:** An ecological community together with its environment, functioning as a unit

**Ecosystem services:** Services which humans derive from ecological functions such as photosynthesis, oxygen production, and water purification

**Embodied carbon:** As used in the Greening Government Strategy, embodied carbon refers to carbon dioxide emitted during the manufacture, transport and construction of building materials, together with end-of-life emissions

**Food security:** A condition in which all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life

**Green infrastructure:** Infrastructure that protects communities and supports Canada's ongoing transition to a clean growth economy

**Light-duty vehicle:** For the purpose of greening government, light-duty vehicle means passenger cars, vans and light trucks consistent with Parts II and III of the Government Motor Vehicle Ordering Guide published by Public Services and Procurement Canada

**Protected area:** A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values ([IUCN, 2016](#))

**Renewable energy:** Energy obtained from natural resources that can be naturally replenished or renewed within a human lifespan

**Resilience:** The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity of self organization, and the capacity to adapt to stress and change ([Intergovernmental Panel on Climate Change, 2014](#))

**Stewardship:** Management of resources in such a way that they can be passed on with integrity to future generations

**Sustainable development:** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs

# REFERENCES

- Agriculture and Agri-Food Canada. 2011. [Water quality 101: potable water micro-system fundamentals](#).
- Agriculture and Agri-Food Canada. 2016. [An Overview of the Canadian Agriculture and Agri-Food System 2016](#).
- Agriculture and Agri-Food Canada. 2016. [Agri-Environmental Indicator Report Series – Report #4](#).
- Biodivcanada.ca. 2017. [2020 Biodiversity Goals and Targets for Canada](#).
- Canadian Biospheres Reserves Association. n.d. [About](#).
- Canadian Broadcasting Corporation. 2017. [Thompson Okanagan recognized as first sustainable tourism destination in the Americas](#).
- Canadian Council of Ministers of the Environment. 2017. [Canada's Air](#).
- Canadian Environmental Assessment Agency. 2016. [Strategic Environmental Assessment](#).
- Canadian Environmental Assessment Agency. 2016. [The Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals](#).
- Canada Green Building Council. 2018. [Home](#).
- Canadian Council of Forest Ministers. 2016. [Overview – Sustainable Forest Management](#).
- Canadian Parks Council. 2014. [Connecting Canadians to Nature](#).
- Canadian Wildlife Health Cooperative. 2018. [State of Wildlife Health CWHC Annual Report 2017/2018](#).
- Carbon Engineering. 2018. [a2f](#).
- Chemistry Industry Association of Canada. [Canadian plastics and chemistry industries set ambitious targets to reuse, recycle or recover 100% of plastics packaging by 2040](#)
- City of Edmonton. n.d. [EnerGuide for Homes: Spot the Difference](#).
- Climate and Clean Air Coalition. n.d. [Home](#).
- ClimateTelling. 2017. [Home](#).
- Commission for Environmental Cooperation. 2017. [Characterization and Management of Food Loss and Waste in North America](#).
- Environment and Climate Change Canada. 2016. [Carbon Pricing Leadership Coalition](#).
- Environment and Climate Change Canada. 2016. [Water governance and legislation: shared responsibility](#).
- Environment and Climate Change Canada. 2017. [Ecological Gifts Program](#).
- Environment and Climate Change Canada. 2018. [Breeding Bird Survey overview](#).
- Environment and Climate Change Canada. 2018. [Cleaning Up Lake Winnipeg – Lake Winnipeg Basin Initiative](#).
- Environment and Climate Change Canada. 2018. [Conservation commitment on the boreal caribou: Val-d'Or population](#).
- Environment and Climate Change Canada. 2018. [Habitat Stewardship Program for species at risk](#).
- Environment and Climate Change Canada. 2018. [Pan-Canadian Framework on Clean Growth and Climate Change](#).
- Environment and Climate Change Canada. 2019. [Aboriginal Fund for Species at Risk](#).
- Environment and Climate Change Canada. 2019. [Environmental Indicators](#).
- Environment and Climate Change Canada. 2019. [Participation in international environmental agreements](#).
- Environment and Climate Change Canada. 2019. [Powering Past Coal Alliance](#).
- Federation of Canadian Municipalities. 2018. [Climate and Sustainability](#).
- Feedback. n.d. [Home](#).
- Fisheries and Oceans Canada. 2018. [Introducing the proposed amended Fisheries Act](#).
- Fisheries and Oceans Canada. 2019. [Fisheries](#).
- Fisheries and Oceans Canada. 2019. [Small Craft Harbours Abandoned and Wrecked Vessels Removal Program](#).
- FLAP Canada. 2018. [Home](#).
- Food and Agriculture Organization of the United Nations. 2013. [Food wastage footprint: impacts on natural resources](#).
- Friends of the Carp River. 2014. [About](#).
- G7. 2018. [Charlevoix Blueprint for Healthy Oceans, Seas and Resilient Coastal Communities](#).
- Global Affairs Canada. 2017. [Canada Taking Action to Combat Desertification](#).

- Global Affairs Canada. 2019. [Canada's Feminist International Assistance Policy](#).
- Global Compact Network Canada. 2019. [About the GCNC](#).
- Government of Canada. 2016. [Backgrounder: 2020 Biodiversity Goals and Targets for Canada](#).
- Government of Canada. 2017. [Report to the House of Commons on Environment and Sustainable Development](#).
- Government of Canada. 2018. [Canada's Implementation of the 2030 Agenda for Sustainable Development: Voluntary National Review](#).
- Government of Canada. 2018. [Canada-Alberta Oil Sands Environmental Monitoring](#).
- Government of Canada. 2018. [COP24 Katowice: annual UN conference on climate change](#).
- Government of Canada. 2019. [Better rules to protect Canada's environment and grow the economy](#).
- Government of Canada. 2019. [Canada Food Guide](#).
- Government of Canada. 2019. [Citizen Science Portal](#).
- Government of Canada. 2019. [Health effects of air pollution](#).
- Government of Canada. 2019. [Ending long-term drinking water advisories in First Nation communities](#).
- Government of Ontario. 2016. [Ontario Passes New Waste-Free Ontario Act](#).
- Great Canadian Shoreline Cleanup. 2019. [Home](#).
- Hewlett-Packard. 2008. [Closed Loop Plastics Program](#).
- ICF Canada. 2018. [Lights on the Path](#).
- Idénergic. n.d. [About Us](#).
- Indigenous and Northern Affairs Canada. 2018. [Climate Change Preparedness in the North Program](#).
- Indigenous and Northern Affairs Canada. 2018. [Toward a new Arctic Policy Framework](#).
- Infrastructure Canada. 2018. [Backgrounder: applying a climate lens to infrastructure projects](#).
- Infrastructure Canada. 2018. [Canada's Core Public Infrastructure Survey](#).
- Infrastructure Canada. 2018. [Investing in Canada Plan](#).
- Infrastructure Canada. 2018. [New Maryland and Oromocto First Nation residents to benefit from public infrastructure projects](#).
- Innovation, Science and Economic Development Canada. 2019. [Clean Growth Hub](#).
- Intact Centre on Climate Adaptation. 2018. [Flood Protection Resources](#).
- Intergovernmental Panel on Climate Change. 2014. [Climate Change 2014 Synthesis Report: Summary for Policymakers](#).
- Intergovernmental Panel on Climate Change. 2018. [Special Report on Global Warming of 1.5°C](#).
- International Energy Agency. 2018. [Energy Efficiency Potential in Canada](#).
- IUCN. 2016. [What are protected areas?](#)
- MEG Energy. 2019. [About](#).
- Municipal Natural Assets Initiative. 2018. [About](#).
- Natural Resources Canada. 2015. [Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation](#).
- Natural Resources Canada. 2015. [Energy Efficiency Trends in Canada](#).
- Natural Resources Canada. 2017. [Forest Certification in Canada](#).
- Natural Resources Canada. 2018. [EnerGuide home evaluation](#).
- Natural Resources Canada. 2018. [Generation Energy](#).
- Natural Resources Canada. 2018. [How does the forest industry contribute to Canada's economy?](#)
- Natural Resources Canada. 2018. [Renewable energy facts](#).
- Natural Resources Canada. 2019. [Forest management and natural disturbances research](#).
- Natural Resources Canada. 2019. [How Canadian innovators are changing our future](#).
- Natural Resources Canada. 2019. [Mission Innovation](#).
- Nunavut Climate Change Centre. 2018. [Climate Change Adaptation Project – Permafrost Thaw and River Erosion in Kugluk Territorial Park](#).
- Parks Canada. 2018. [Parks Canada BioBlitz](#).
- Parks Canada. 2018. [How to become a volunteer](#).
- Parks Canada. 2019. [About Rouge National Park](#).
- Parks Canada. 2019. [Multimedia](#).
- Parks Canada. 2019. [Parks Canada Attendance 2017-2018](#).

- Port of Vancouver. 2019. [Enhancing Cetacean Habitat and Observation \(ECHO\) Program](#)
- Sachs, J., Schmidt-Traub, G., Kroll, C., Durand-Lafortune, G., and Fuller, G. 2018. [SDG Index and Dashboards – Global Report](#).
- Smart Prosperity. 2018. [Clean Innovation: Why it Matters and How to Accelerate it Across the Canadian Economy](#).
- St. Lawrence Action Plan 2011-2026. 2017. [Community Interaction Program](#)
- Statistics Canada. 2018. [Environmental and Clean Technology Products Economic Account, 2017](#).
- Statistics Canada. 2018. [Sustainable Development Goals Data Hub](#).
- Statistics Canada. 2019. [Household and the Environment Survey](#).
- Sustainable Development Technology Canada. 2019. [Eligibility](#).
- Thompson Okanagan Tourism Association. 2018. [What is a biosphere?](#)
- Transport Canada. 2018. [If you find an abandoned boat or wreck](#).
- Transport Canada. 2019. [Abandoned Boats Program](#).
- Treasury Board of Canada Secretariat. 2018. [Greening Government Strategy](#).
- Treasury Board of Canada Secretariat. 2019. [Government of Canada's Greenhouse Gas Emissions Inventory](#).
- United Nations Education, Scientific and Cultural Organization. 2017. [Canada's Biosphere Reserves](#).
- United Nations Framework Convention on Climate Change. 2018. [The Paris Agreement](#).
- United Nations. 1992. [Convention on Biological Diversity](#).
- United Nations. 2007. [United Nations Declaration on the Rights of Indigenous Peoples](#).
- United Nations. 2015. [Transforming Our World – The 2030 Agenda for Sustainable Development](#).
- United Nations. 2016. [The Kigali Amendment to the Montreal protocol](#).
- United Nations. 2018. [Canada's Implementation of the 2030 Agenda for Sustainable Development](#).
- Université Laval. 2019. [Sustainable Development](#).
- Walmart Canada. 2018. [Walmart Canada commits to zero food waste by 2025 and Walmart Foundation grants \\$19M to local organizations](#).
- Yale University. 2018. [Environmental Performance Index](#).
- Yukon College. 2018. [Permafrost thaw, food security and traditional activities: Impacts on Jean Marie River First Nation](#)
- Yukon News. 2018. [Vuntut Gwitchin First Nation plugs in Old Crow solar power project](#)

