



Agriculture and  
Agri-Food Canada

Agriculture et  
Agroalimentaire Canada

Agriculture and Agri-Food Canada

# 2017-2020 Departmental Sustainable Development Strategy

October, 2017

Canada

2017-2020 Departmental Sustainable Development Strategy

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## Executive summary

The Departmental Sustainable Development Strategy describes Agriculture and Agri-Food Canada's objectives and plans for sustainable development appropriate to its mandate. It articulates the Department's vision and decision-making process for sustainable development, and sets out its contribution to the goals and targets of the [Federal Sustainable Development Strategy](#), as well as the application of Strategic Environmental Assessments.

## Section 1: Context for the Departmental Sustainable Development Strategy

The [2016-2019 Federal Sustainable Development Strategy](#) presents the Government of Canada's sustainable development goals and targets, as required by the [Federal Sustainable Development Act](#). In keeping with the objectives of the Act to integrate environmental, social and economic considerations into decision making, and make such decisions more transparent and accountable to Parliament, Agriculture and Agri-Food Canada supports reaching goals laid out in the Federal Sustainable Development Strategy through the activities described in this Departmental Sustainable Development Strategy.

**Achieving a Sustainable Future**  
The **2016–2019** Federal Sustainable Development Strategy

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

**13** Aspirational long-term goals      **41** Federal organizations

[Canada.ca/federal-sustainable-development-strategy](http://Canada.ca/federal-sustainable-development-strategy) 

## Section 2: Sustainable Development in Agriculture and Agri-Food Canada

This Departmental Sustainable Development Strategy presents the results for commitments under the following government-wide goals:

- [Low-Carbon Government](#);
- [Effective Action on Climate Change](#);
- [Sustainable Food](#); and,
- [Safe and Healthy Communities](#).

The Minister of Agriculture and Agri-Food is specifically responsible for the Sustainable Agriculture target under the Sustainable Food goal. Agriculture and Agri-Food Canada is a key department that contributes to the other three goals. Departmental contributions to these goals

are supported by programs and initiatives under [Growing Forward 2](#), such as innovation and on-farm action (for example: completion of environmental risk assessments and incentives for the implementation of beneficial management practices). The next policy framework - [Canadian Agricultural Partnership](#), which is set to begin April 1, 2018, will emphasize climate change mitigation and adaptation, environmental sustainability and science.

Agriculture and Agri-Food Canada's contributions to the Federal Sustainable Development Strategy goals are summarized below:



**Goal: Low-Carbon Government** – The federal government is committed to becoming a leader on climate change, and is taking action to ensure that it is doing its part while contributing to the broader economy-wide plan.

The federal government is targeting to reduce greenhouse gas emissions from its buildings and fleets by 40% below 2005 levels by 2030, with an aspiration to achieve it by 2025.

Agriculture and Agri-Food Canada is a large federal custodian representing almost 7% of the currently scoped-in federal government greenhouse gas emissions, and is well-positioned to continue making contributions to the Low-Carbon Government target. The Department has already reduced its greenhouse gas emissions by 35% as of 2016–17, and it will continue to make efforts predominantly through improvements to the energy efficiency of its buildings and operations and the modernization of its fleet.



**Goal: Effective Action on Climate Change** – Climate change is one of the greatest challenges of our time. Tackling climate change is important for our environment and to our economy. Canadian farmers have always been responsible stewards of the land, and are part of the climate change solution. Through improved management practices and provision of bioproducts, the agriculture sector has the potential to support Canada's greenhouse gas reduction commitment.

On December 9, 2016, Canada's First Ministers adopted the Pan-Canadian Framework on Clean Growth and Climate Change, which identifies collaborative federal, provincial and territorial actions to reduce greenhouse gas emissions and enable sustainable economic growth. Collaborative work related to agriculture under the Pan-Canadian Framework could include increasing stored carbon, generating bioenergy and bioproducts, and advancing innovation. This work will be supported primarily by the [Canadian Agricultural Partnership](#).

Agriculture and Agri-Food Canada is committed to funding and conducting targeted research to increase knowledge of climate change relative to agriculture. Prioritizing research funding on greenhouse gas emissions will accelerate the agriculture sector's ability to reduce the most significant greenhouse gas emission sources, such as methane, primarily from cattle, and nitrous oxide primarily from fertilizer use. Building Agriculture and Agri-Food Canada science discovery capacity will also allow the Department to respond agri-environmental challenges related to climate change adaptation.

Currently, the Department undertakes innovative research and development activities that contribute to the sustainable growth of the sector with climate change considerations in mind, including supporting increasing resource and input use efficiency (for example, land, water, and nutrients); and, developing beneficial management practices and precision agriculture technologies (for example: variable rate irrigation and robotic feeding systems). Department-led innovation and programming also play a significant role in enhancing the agriculture and agri-food sector's resilience to changing climatic conditions (for example: increased risks from pests, drought, and flooding), and to better address water and soil conservation and development issues.

The [Agricultural Greenhouse Gases Program](#), renewed from 2016-2021 for \$27 million, supports projects that will create technologies, practices and processes that can be adopted by farmers to mitigate greenhouse gas emissions. These projects will also help farmers increase their understanding of how greenhouse gas emissions are connected to farming practices. Agriculture and Agri-Food Canada also conducts targeted research to increase knowledge of agriculture's impact on water resources and enhance knowledge of nutrient management, to increase efficiency and lower the potential of contamination of water resources.



**Goal: Sustainable Food** – Collective action by Agriculture and Agri-Food Canada and its partners contribute to an innovative agri-food and agriculture sector. Canada's work on sustainable agricultural production includes tracking progress on environmental sustainability, scientific research projects, and programs designed to transfer scientific knowledge, practices, and processes to agricultural producers. Agriculture and Agri-Food Canada promotes innovation and sustainable practices by assessing and reporting on the performance of the agriculture sector; conducting targeted research related to the impact of agriculture on climate change, soils, biodiversity and water; and, providing cost-shared funding to provinces and territories to support on-farm assessment of environmental risks and adoption of effective mitigation measures.

The next agricultural policy framework - [Canadian Agricultural Partnership](#), which is set to begin April 1, 2018, will include actions that support this goal. One priority area of the Partnership will highlight environmental sustainability and climate change. It will focus on building sector capacity to reduce agricultural greenhouse gas emissions, protect the environment and adapt to climate change by enhancing sustainable growth while increasing production.



**Goal: Safe and Healthy Communities** – The Government of Canada is committed to ensuring that 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. The Department's scientists work on enhancing air quality by reducing undesirable agricultural inputs into the atmosphere. Concurrently, Agriculture and Agri-Food Canada's science addresses key challenges and opportunities facing agricultural production. This includes optimizing production system performance in response to changes in air quality (for example: higher carbon dioxide and ozone).

Under the Federal Contaminated Sites Action Plan, the Department contributes to the action for the federal government to demonstrate leadership on assessing and remediating contaminated sites by completing remedial activities at four Federal Contaminated Sites Action Plan eligible departmental sites.

## Section 3: Commitments for Agriculture and Agri-Food Canada

The below charts outline departmental commitments to the [2016-2019 Federal Sustainable Development Strategy](#).

[Growing Forward 2](#), a five-year policy framework, sets the foundation for federal-provincial-territorial programs and services. Growing Forward 2 funding will expire March 31, 2018. Program components under the successor policy framework, the [Canadian Agricultural Partnership](#), are being developed and will come into force April 1, 2018. Updates to Agriculture and Agri-Food Canada's commitments to the Strategy under the new policy framework will be included in subsequent Departmental Sustainable Development Strategies.

### **Low-Carbon Government: The Government of Canada leads by example by making its operations low-carbon**

Responsible Minister: All ministers

Low-Carbon Government  Federal Sustainable Development Strategy targets	Federal Sustainable Development Strategy Contributing Actions	Corresponding departmental actions	Contribution by each departmental action to the Federal Sustainable Development Strategy goal and target	Starting points and performance indicators for departmental actions	Programs in which the departmental actions will occur
Reduce greenhouse gas emissions from federal government buildings and fleets by 40% below 2005 levels by 2030, with an aspiration to achieve it by 2025	Improve the energy efficiency of our buildings	<p>Undertake building energy efficiency feasibility studies at candidate facilities with greenhouse gas reduction potential</p> <p>Undertake heating, ventilation and air conditioning building automation optimization retrofit projects for laboratory and office complexes</p> <p>Procure 35% green electricity from renewable energy sources in Alberta</p> <p>Undertake employee awareness of energy conservation initiatives</p>	Actions that reduce the demand for energy or switch to cleaner sources of energy will lead to reductions in greenhouse gas emissions.	<p>Greenhouse gas emissions from facilities in fiscal year 2005–06 (base year) = <b>90.6 ktCO<sub>2</sub>e</b></p> <p>Greenhouse gas emissions from facilities in fiscal year 2016–17 = <b>66.2 ktCO<sub>2</sub>e</b></p> <p>Renewable power emission credits applied in fiscal year 2016–17 = <b>7.1 ktCO<sub>2</sub>e</b></p> <p>Percentage (%) change in greenhouse gas emissions from facilities from fiscal year 2005–06 to fiscal year 2016–17 = <b>35 %</b></p>	Program 3.1 Internal Services
Reduce greenhouse gas emissions from federal government buildings and fleets by 40% below 2005 levels by 2030, with an aspiration to achieve it by 2025	Modernize our fleet	<p>Reduce carbon intensity through vehicle purchase and replacement, for example electric vehicles, hybrids, more fuel efficient vehicles</p> <p>Right Size the fleet</p> <p>Utilize fuel efficient vehicles</p> <p>Promote behavior change – for example, anti-idling campaigns, driver training, increased pooling of vehicles</p>	Actions that reduce the amount of fuel consumed for fleet operation or switch to less greenhouse gas intensive sources of fuels will contribute to greenhouse gas reductions.	<p>Greenhouse gas emissions from fleet in fiscal year 2005–06 (base year) = <b>8.2 ktCO<sub>2</sub>e</b></p> <p>Greenhouse gas emissions from fleet in fiscal year 2016–17 = <b>5.3 ktCO<sub>2</sub>e</b></p> <p>Percentage (%) change in greenhouse gas emissions from fleet from fiscal year 2005-06 to fiscal year 2016–17 = <b>36%</b></p>	Program 3.1 Internal Services

<p><b>Low-Carbon Government</b></p> <p><b>Federal Sustainable Development Strategy targets</b></p>	<p><b>Federal Sustainable Development Strategy Contributing Actions</b></p>	<p><b>Corresponding departmental actions</b></p>	<p><b>Contribution by each departmental action to the Federal Sustainable Development Strategy goal and target</b></p>	<p><b>Starting points and performance indicators for departmental actions</b></p>	<p><b>Programs in which the departmental actions will occur</b></p>
		<p>Develop fleet infrastructure to support alternative fuels, for example electric vehicle charging stations</p>		<p>(2005 – 313 vehicles, 2017 – 910 vehicles)</p>	
<p>Reduce greenhouse gas emissions from federal government buildings and fleets by 40% below 2005 levels by 2030, with an aspiration to achieve it by 2025</p>	<p>Support the transition to a low-carbon economy through green procurement</p>	<p>Continue to incorporate environmental considerations into the Procurement Review Board's decision making for 70% of the procurement files for applicable commodities it reviews as part of Agriculture and Agri-Food Canada's key management procurement process</p> <p>Train procurement and materiel management specialists on green procurement, using the Canada School of Public Service Green Procurement course</p> <p>Ensure key officials include contribution to and support for the Government of Canada Policy on Green Procurement objectives in their performance evaluations</p> <p>Maintain target that 95% of copy paper purchases will contain a minimum of 30% recycled content and be certified to a recognized environmental standard to reduce the environmental impact of its production</p> <p>Continue the requirement that 100% of all new contracts that include janitorial services will include the use of janitorial products that minimize the environmental impact</p> <p>Leverage common use procurement instruments that incorporate environmental considerations where available and feasible</p>	<p>Green procurement incorporates environmental considerations into purchasing decisions and is expected to motivate suppliers to green their goods, services and supply chain. Greenhouse gas reductions are one area of consideration in green procurement.</p>	<p>Percentage of procurement files reviewed by the Procurement Review Board that contemplated environmental considerations for applicable commodities</p> <p>Number and percentage of specialists in procurement who have completed training on green procurement</p> <p>Number and percentage of functional heads of procurement and materiel whose performance evaluation includes support and contribution towards green procurement, in the given fiscal year</p> <p>Dollar value or volume of copy paper purchases that meet the target objective relative to the total dollar value or volume of all copy paper purchases in the year in question</p> <p>Dollar value or number of contracts awarded that meet the target objective relative to the total dollar value or number of new contracts that include janitorial services for the year in question</p>	<p>Program 3.1 Internal Services</p>



Low-Carbon Government Federal Sustainable Development Strategy targets	Federal Sustainable Development Strategy Contributing Actions	Corresponding departmental actions	Contribution by each departmental action to the Federal Sustainable Development Strategy goal and target	Starting points and performance indicators for departmental actions	Programs in which the departmental actions will occur
Reduce greenhouse gas emissions from federal government buildings and fleets by 40% below 2005 levels by 2030, with an aspiration to achieve it by 2025	Promote sustainable travel practices	Maintain level of greenhouse gas emissions from departmental business-related travel (scoped to air travel only) to at least a 35% reduction until 2020–21 relative to 2005–06	Actions taken to reduce the amount of business travel will reduce greenhouse gas emissions.	Greenhouse gas emissions from departmental business travel in fiscal year 2005–06 (base year) = <b>9.2 ktCO<sub>2</sub>e</b>  Greenhouse gas emissions from departmental business travel in fiscal year 2016–17 = <b>3.9 ktCO<sub>2</sub>e</b>  Percentage reduction in business travel emissions relative to 2005–06 to fiscal year 2016–17 = <b>57%</b>	Program 3.1 Internal Services

**Effective Action on Climate Change: A low-carbon economy contributes to limiting global average temperature rise to well below two degrees Celsius and supports efforts to limit the increase to 1.5 degrees Celsius**

Responsible Minister: Minister of Environment and Climate Change; supported by a whole-of-government approach to implementation

Effective Action on Climate Change Federal Sustainable Development Strategy targets	Federal Sustainable Development Strategy Contributing Actions	Corresponding departmental actions	Contribution by each departmental action to the Federal Sustainable Development Strategy goal and target	Starting points and performance indicators for departmental actions	Programs in which the departmental actions will occur
By 2030, reduce Canada's total greenhouse gas emissions by 30%, relative to 2005 emission levels	Conduct climate policy research and analysis	<p>Implement the <a href="#">Agricultural Greenhouse Gases Program</a> which will:</p> <p>Promote environmentally responsible agriculture and support the development of approaches and tools that assist the agriculture sector in mitigating greenhouse gas</p> <p>Support initiatives that have the potential to lead the way to broader adoption or application of beneficial management practices on farm and by the sector more generally</p> <p>Support efforts to understand the potential impacts of and approaches to mitigate agricultural greenhouse gas</p>	<p>The <a href="#">Agricultural Greenhouse Gases Program</a> supports projects that will create technologies, practices and processes that can be adopted by farmers to mitigate greenhouse gas emissions. These projects will also help farmers increase their understanding of how greenhouse gas emissions are connected to farming practices.</p> <p>The Program will ultimately contribute to the mitigation of greenhouse gas emissions and other positive longer-term environmental impacts for Canada, which in turn will support</p>	<p>The expected result is that greenhouse gas mitigation information and technologies developed and/or are made available to farmers.</p> <p>The performance indicator is the number of new beneficial management practices developed and/or demonstrated through field days and workshops under the <a href="#">Agricultural Greenhouse Gases Program</a> from 2016 to 2021.</p> <p>A target was set for 12 by March 31, 2021. Under the previous Agricultural Greenhouse Gases</p>	Sub-program 2.1.7 Agricultural Greenhouse Gases Program



<p><b>Effective Action on Climate Change</b></p> <p><b>Federal Sustainable Development Strategy targets</b></p>	<p><b>Federal Sustainable Development Strategy Contributing Actions</b></p>	<p><b>Corresponding departmental actions</b></p>	<p><b>Contribution by each departmental action to the Federal Sustainable Development Strategy goal and target</b></p>	<p><b>Starting points and performance indicators for departmental actions</b></p>	<p><b>Programs in which the departmental actions will occur</b></p>
		<p>emissions and will result in better strategies for climate change adaptation across the agricultural sector</p>	<p>the Government of Canada's commitments to the environment and to climate change. The program contributes to the Government of Canada's continued commitment to the Global Research Alliance on Agricultural Greenhouse Gases' efforts to mitigate agricultural greenhouse gas worldwide.</p>	<p>Program (2011-2016), 49 beneficial management practices were developed and demonstrated through field days and workshops.</p>	
<p>By 2030, reduce Canada's total greenhouse gas emissions by 30%, relative to 2005 emission levels</p>	<p>Develop a solid base of scientific research and analysis on climate change</p>	<p>Conduct targeted research to increase knowledge of climate change relative to agriculture</p>	<p>Agriculture and Agri-Food Canada's science addresses key challenges and opportunities facing agricultural production. This includes managing production risks from weather variability and climate change.</p> <p>The Department's research related to production systems also informs the development of the Department and broader government policies regarding adaptation to climate risk.</p>	<p>The expected result for the climate change research is to increase knowledge by the scientific community in the area of climate change and agriculture.</p> <p>The performance indicator for this area is the number of scientific articles accepted for publication through an external peer-reviewed process.</p> <p>A target was set for 75 articles related to climate change by March 31, 2018. As of 2015–16, Agriculture and Agri-Food Canada has published 587 articles in the area of climate change.</p>	<p>Sub-program 2.1.2 Research Accelerating Innovation</p>

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

Responsible Minister: Minister of Agriculture and Agri-Food; Minister of Health; Minister of Fisheries, Oceans and the Canadian Coast Guard

Sustainable Food Federal Sustainable Development Strategy targets	Federal Sustainable Development Strategy Contributing Actions	Corresponding departmental actions	Contribution by each departmental action to the Federal Sustainable Development Strategy goal and target	Starting points and performance indicators for departmental actions	Programs in which the departmental actions will occur
Ensure safe and accessible food supply by mitigating risks to animal and plant resources from pests, diseases and other health hazards and prevent risks to health of Canadians	Promote innovation and sustainable practices	<p>Build the capacity of Canada’s agriculture, agri-food and agri-based products sector to promote innovation and encourage adoption of sustainable agricultural practices at farm and regional levels by working with provinces and territories. For example, work to increase the number of beneficial management practices implemented to 17,600 by March 31, 2019, through cost-shared programming under the Growing Forward 2 framework (2013-2018).</p> <p>Provide cost-shared funding to provinces and territories that provide a systematic approach to farmers to assess priority environmental risks, plan effective mitigation and increase adoption of sustainable agricultural practices at farm and regional levels.</p>	This collective action by Agriculture and Agri-Food Canada and its federal, provincial and non-government organization partners contributes to the overall stability of agricultural working environments and their ability to sustain a high level of agricultural production.	<p>The expected result is that the sector is taking actions to minimize environmental risks and is using inputs efficiently.</p> <p>The performance indicator is the cumulative number of beneficial management practices implemented under Growing Forward 2 Federal-Provincial-Territorial Cost shared programming.</p> <p>A target was set of 17,600 by March 31, 2019. In 2014–15, 4,579 beneficial management practices were reported, representing 26% of the cumulative performance target. In 2015–16, 12,701 beneficial management practices were reported, representing 72% of the cumulative performance target.</p>	Sub-program 2.1.6 Federal-Provincial-Territorial Cost-shared Environment
By 2030, agricultural working landscapes provide a stable or improved level of biodiversity and efficient management towards water and soil quality for food production	Increase knowledge of sustainable agriculture, fisheries and aquaculture	<p>Assess and report on the collective environmental impact of the adoption of sustainable agriculture practices by farmers on the Canadian landscape</p> <p>Conduct targeted research to increase knowledge of climate change relative to agriculture</p> <p>Conduct targeted research to increase knowledge of agriculture’s impact on water resources and enhance knowledge of nutrient management to increase efficiency and lower the potential of contamination of</p>	The Department’s work on sustainable agricultural production includes the following components: tracking progress on environmental sustainability, undertaking scientific research projects (both discovery and applied), and providing programs designed to transfer scientific knowledge, practices, and processes to agricultural producers. These collective actions will make agricultural production more sustainable as	<p>The expected result is to increase the knowledge by the scientific community in the area of sustainable agriculture. Agriculture and Agri-Food’s contribution to that result is to increase knowledge by the scientific community in the areas of climate change, nutrient management and air.</p> <p>It is important to monitor the agriculture sector’s environmental sustainability. To that end, the</p>	Sub-program 2.1.1 Science Supporting an Innovative and Sustainable Sector  Sub-program 2.1.2 Research Accelerating Innovation

Sustainable Food Federal Sustainable Development Strategy targets	Federal Sustainable Development Strategy Contributing Actions	Corresponding departmental actions	Contribution by each departmental action to the Federal Sustainable Development Strategy goal and target	Starting points and performance indicators for departmental actions	Programs in which the departmental actions will occur
		<p>water resources</p> <p>Conduct basic and applied research to increase knowledge of the effects of agricultural production on air</p>	<p>scientific knowledge, practices and processes are adopted in Canada.</p> <p>This collective action by Agriculture and Agri-Food Canada and its federal, provincial and non-government organization partners contributes to the overall stability of agricultural working landscapes and their ability to sustain a high level of agricultural production by Canadian farmers.</p>	<p>Department ensures that agri-environmental indicators are available to assess and report on the agriculture sector's environmental sustainability.</p> <p>The following performance indicators are used to measure success and demonstrate progress regarding Departmental actions:</p> <p>Reporting on the environmental sustainability of Canadian agriculture every four years in conjunction with the release of the Canadian Census of Agriculture which includes detailed reporting on nutrient management, air quality, water quality and soil quality metrics</p> <p>Number of scientific articles accepted for publication through an external peer-reviewed process</p> <p>The target for reporting is currently set at every four years in conjunction with the Census of Agriculture.</p> <p>The targets of the scientific articles are set on a subject basis as follows:</p> <p>75 for climate change 75 for nutrient cycling 50 for air resources</p>	

Sustainable Food Federal Sustainable Development Strategy targets	Federal Sustainable Development Strategy Contributing Actions	Corresponding departmental actions	Contribution by each departmental action to the Federal Sustainable Development Strategy goal and target	Starting points and performance indicators for departmental actions	Programs in which the departmental actions will occur
				The expected results date is March 31, 2018. As of 2015–16, Agriculture and Agri-Food Canada has published 587 articles for climate change, 246 articles for nutrient cycling and 324 articles for air.	

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

Responsible Minister: Minister of Environment and Climate Change; Minister of Health

Safe and Healthy Communities Federal Sustainable Development Strategy targets	Federal Sustainable Development Strategy Contributing Actions	Corresponding departmental actions	Contribution by each departmental action to the Federal Sustainable Development Strategy goal and target	Starting points and performance indicators for departmental actions	Programs in which the departmental actions will occur
<p>Implement the Air Quality Management System to:</p> <p>Increase the percentage of the Canadian population living in areas where measured outdoor concentrations are below the Canadian Ambient Air Quality Standards for fine particulate matter and ozone compared to the year 2000</p>	<p>Better understand air pollutants and harmful substances</p>	<p>Agriculture and Agri-Food Canada does not contribute directly to an indicator in this area. As part of its work on sustainable agricultural production, the Department conducts research to increase knowledge of the effects of agricultural production on air.</p> <p>Departmental efforts on sustainable agricultural production include several components: tracking progress on environmental sustainability; undertaking scientific research projects (both discovery and applied); and, providing programs designed to transfer scientific knowledge, practices, and processes to agricultural producers. Collectively, these actions will make agricultural production more sustainable as scientific knowledge, practices and processes are adopted in Canada.</p>	<p>Agriculture and Agri-Food Canada does not contribute directly to a milestone in this area. As part of its work on sustainable agricultural production, the Department conducts research to increase knowledge of the effects of agricultural production on air.</p> <p>The Department's scientists work on enhancing air quality by reducing undesirable agricultural inputs into the atmosphere. Concurrently, Agriculture and Agri-Food Canada's science addresses key challenges and opportunities facing agricultural production. This includes optimizing production system performance in response to changes in air quality (for</p>	<p>The expected result is an increase in knowledge by the scientific community of the effects of agricultural production on air.</p> <p>The following performance indicators are used to assess progress towards measuring success in Departmental actions:</p> <p>Number of scientific articles accepted for publication through an external peer-reviewed process</p> <p>The target for the publications is 50 papers by March 31, 2018. As of 2015–16 Agriculture and Agri-Food Canada has published 324 articles for air.</p>	<p>Sub-program 2.1.1: Science Supporting an Innovative and Sustainable Sector</p>

Safe and Healthy Communities Federal Sustainable Development Strategy targets	Federal Sustainable Development Strategy Contributing Actions	Corresponding departmental actions	Contribution by each departmental action to the Federal Sustainable Development Strategy goal and target	Starting points and performance indicators for departmental actions	Programs in which the departmental actions will occur
		<p>The following action is undertaken by Agriculture and Agri-Food Canada in support of increasing knowledge and promotion of innovation and sustainable practices:</p> <p>Conduct foundational research to increase knowledge of the effects of agricultural production on air</p>	example: higher carbon dioxide and ozone).		
By 2020, address the 4,300 substances identified as priorities for action under the Chemicals Management Plan	Demonstrate leadership on assessing and remediating contaminated sites	Complete remedial activity by 2019–20 at Agriculture and Agri-Food Canada’s 4 contaminated sites classified as a highest priority site under the Federal Contaminated Sites Action Plan	Contribute to the short-term milestone to remediate 599 of the highest priority federal sites under the Federal Contaminated Sites Action Plan by 2019–20.	<p>Agriculture and Agri-Food Canada has no suspected or known contaminated sites eligible for assessment funding through the Federal Contaminated Sites Action Plan.</p> <p>Agriculture and Agri-Food Canada has four contaminated sites eligible for remediation funding through the Federal Contaminated Sites Action Plan.</p>	Program 3.1 Internal Services

## Section 4. Integrating sustainable development

Agriculture and Agri-Food Canada's mission statement – "to provide leadership in the growth and development of a competitive, innovative and sustainable Canadian agriculture and agri-food sector" – identifies sustainability as a core attribute for the sector.

Achieving a sustainable agriculture and agri-food sector is a process of continuous improvement in the responsible use and management of agricultural resources along all points of the value chain, including producers, processors, and retailers. To improve sector sustainability, there is also a need to consider domestic and global agriculture and agri-food markets, and how well the sector responds and translates those market requirements to sustainable choices for consumers. Sustainable agriculture contributes to sector profitability by safeguarding the land's productive capacity now and into the future, and reducing operating costs through increased efficiencies. It also enhances the reputation of the sector and of producers as good stewards of the land, and helps to maintain access to existing markets and open new markets, creating opportunities for growth. These outcomes are integral to the sustainability and competitiveness of the Canadian agriculture sector and support its important contribution to Canada's economy.

The Department invests in a more sustainable agriculture and agri-food sector by supporting innovation and on-farm action, for example completion of environmental risk assessments and incentives for the implementation of beneficial management practices. Since jurisdiction over agriculture in Canada is shared with provincial and territorial governments, on-farm programs are based on partnerships and cost-shared between both levels of government and delivered by provincial or territorial agencies.

Agriculture and Agri-food Canada also supports research and development activities that contribute to the sustainable growth of the sector, including supporting increased resource and input use efficiency (land, water and nutrients), and developing beneficial management practices and precision agriculture technologies, such as, variable rate irrigation and robotic feeding systems. Other areas of research focus on the development of novel agriculture and agri-food products, including: transforming crops into agri-based bioproducts, and adding value to agricultural wastes. Department-led innovation and programming plays a significant role in addressing water and soil conservation issues, and reducing greenhouse gas emissions of the sector. Some investments contribute to broader clean technology and clean growth goals by reducing greenhouse gas emissions in other sectors, for example electricity production, through utilizing agricultural waste for bioenergy.

These activities contribute to a number of broader intergovernmental sustainable development goals, for example, the Pan-Canadian Framework on Clean Growth and Climate Change, and the Lake Erie Domestic Action Plan. Agriculture and Agri-Food Canada also engages Canadians and stakeholders on key priorities such as the development of A Food Policy for Canada. Agriculture and Agri-Food Canada is collaborating with other federal departments, including Health Canada and Environment and Climate Change Canada, to develop a policy that will set a long-term vision for the health, environmental, social, and economic goals related to food, while identifying actions we can take in the short-term. One of the four themes guiding food policy consultations is 'conserving our soil, water, and air', and addresses environmental sustainability and stewardship.

Agriculture and Agri-Food Canada is also responsible for implementing the [Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals](#). To meet these requirements, the Department conducts Strategic Environmental Assessments for departmental policy, plan, or program proposals, which includes an analysis of the impacts of the given proposal on the environment, as well as considering whether the outcomes of the proposals could affect any of the Federal Sustainable Development Strategy goals and targets. The process comprises three steps, applied progressively as warranted, as follows:

1. Initial Review – a review to determine whether there is any potential for environmental effects associated with the proposal, or whether a previously conducted assessment still applies;
2. Preliminary Scan – an assessment to determine whether important environmental effects, either positive or negative, including effects on the achievement of Federal Sustainable Development Strategy goals and targets, would result from the implementation of the proposal; and
3. Detailed Strategic Environmental Assessment – a more comprehensive analysis when important environmental effects are identified, including strategies to mitigate the

negative, or enhance the positive, effects, or proposed measures to address any possible public and stakeholder concerns.

Agriculture and Agri-Food Canada is committed to:

- Continuously updating its Strategic Environmental Assessment guidance material (for example: templates and guidelines) to maintain relevance and compliance with the Cabinet Directive;
- Maintaining a Strategic Environmental Assessment database to track the number of policies, plans and program proposals assessed and/or Strategic Environmental Assessments completed;
- Ensuring consideration of any effects of proposals, on the goals and targets of the Federal Sustainable Development Strategy when conducting Strategic Environmental Assessments; and
- Issuing a public statement of environmental effects whenever a detailed Strategic Environmental Assessment is conducted, once initiatives are approved or announced, including the impact on the Federal Sustainable Development Strategy goals and targets, if applicable. Agriculture and Agri-Food Canada Strategic Environmental Assessment information can be found on the [Department's web page](#).