



# Agriculture and Agri-Food Canada's 2020-21 Departmental Sustainable Development Strategy Report

AAFC no. : 13089E

ISSN : 2561-2875

Catalogue no. : A1-35E-PDF

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This report on progress supports the commitment in the *Federal Sustainable Development Act* (FSDA) to make sustainable development decision-making more transparent and accountable to Parliament. It also contributes to an integrated, whole-of-government view of activities supporting environmental sustainability.

The departmental information reported accounts for information previously prepared in accordance with Agriculture and Agri-Food Canada's 2020 to 2023 Departmental Sustainable Development Strategy.

## 1. Introduction to the Departmental Sustainable Development Strategy

The [2019 to 2022 Federal Sustainable Development Strategy \(FSDS\)](#) presents the Government of Canada's sustainable development goals and targets, as required by the [Federal Sustainable Development Act](#). In keeping with the purpose of the Act, to provide

the legal framework for developing and implementing a Federal Sustainable Development Strategy that will make sustainable development decision-making more transparent and accountable to Parliament, Agriculture and Agri-Food Canada has developed this report to demonstrate progress in implementing its Departmental Sustainable Development Strategy.

## 2. Sustainable development in Agriculture and Agri-Food Canada

Agriculture and Agri-Food Canada's 2020 to 2023 Departmental Sustainable Development Strategy describes the Department's actions in support of achieving

- Greening Government
- Effective Action on Climate Change; and
- Sustainable Food.

This report presents available results for the departmental actions pertinent to these goals. Previous years' reports are posted on [Agriculture and Agri-Food Canada's website](#).

### 3. Departmental performance by FSDS goal

The following tables provide performance information on departmental actions in support of the FSDS goals listed in section 2.

#### Context: Greening Government

The federal government is committed to becoming a leader on climate change and has continued taking action to ensure that it is doing its part, while contributing to the broader economy-wide plan. Agriculture and Agri-Food Canada (AAFC) is a large federal custodian, representing almost 5% of the currently scoped-in federal government greenhouse gas (GHG) 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 45% from fiscal year 2005-06 to 2020-21, 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. In 2020-21, the COVID-19 pandemic had an impact on the energy consumption at Department facilities, thereby contributing to the reduction of GHG emissions.



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

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
Reduce GHG emissions from federal government facilities and fleets by 40% below 2005 levels 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)	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	Explore options and initiate implementation of Agriculture and Agri-Food Canada's Portfolio 2050 Carbon-neutral study.  Construct all new federal buildings (including build-to-lease and public-private partnerships), starting at the latest in 2022, to be net-zero carbon unless a lifecycle cost benefit analysis indicates net-zero carbon ready construction, and unless incremental central funding is unavailable for projects with costs	<b>Performance indicators:</b>  Percentage change in greenhouse gas emissions from 2005-06 fiscal year (baseline) to current reporting fiscal year for: •Facilities •Fleet  <b>Starting points:</b>  • 35.6% (59.3 ktCO <sub>2</sub> e) in 2018-19 relative to 2005-06 (92.0 ktCO <sub>2</sub> e) for facilities	<b>Result:</b>  Percentage (%) reduction in greenhouse gas emissions from facilities from fiscal year 2005-06 (baseline) to fiscal year 2020-21 = 45.7%  Greenhouse gas emissions from facilities in fiscal year 2020-21 = 55.3 ktCO <sub>2</sub> e.  Renewable power emission credits applied in fiscal year 2020-21 = 5.3 ktCO <sub>2</sub> e.	<b>FSDS:</b> Actions that reduce the demand for energy or switch to lower carbon sources of energy will lead to reductions in greenhouse gases from building operations.  <b>Contribution to United Nations (UN) Sustainable Development Goals (SDG):</b>  SDG 12 - Responsible Consumption and Production

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
	<p>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</p>	<p>exceeding what departments can support within existing reference levels.</p> <p>Deploy clean technologies as part of undertaking building energy efficiency measures, striving to do so on a holistic facility-basis to achieve deeper greenhouse gas reductions, which may include heating, ventilation, and air conditioning building automation optimization retrofit projects for laboratory and office complexes, and building recommissioning.</p> <p>Undertake facility manager energy training sessions, and increase employee awareness of energy conservation practices.</p>	<ul style="list-style-type: none"> <li>• 50% (4.1 ktCO<sub>2</sub>e) in 2018-19 relative to 2005-06 (8.2 ktCO<sub>2</sub>e) for fleet</li> </ul> <p><b>Targets:</b></p> <ul style="list-style-type: none"> <li>• 40% by 2030-31 and 80% by 2050-51 relative to 2005-06 for facilities</li> <li>• 40% by 2030-31 and 80% by 2050-51 relative to 2005-06 for fleet</li> </ul>		<p>SDG 7 – Affordable and Clean Energy</p> <p>The deployment of clean technology as part of building energy efficiency projects will raise awareness about clean technology opportunities in the built environment including specialized buildings, and ultimately reduce greenhouse gas emissions and support more efficient production and consumption</p> <p>SDG 12 - Responsible Consumption and Production</p> <p>SDG 7 – Affordable and Clean Energy</p>
	<p>Fleet management will be optimized including by applying telematics to collect and analyze vehicle usage data on vehicles scheduled to be replaced</p>	<p>Reduce carbon intensity through vehicle purchase and replacement (e.g., electric vehicles, hybrids, more fuel efficient vehicles), including by ensuring that 75% of new light-duty unmodified administrative fleet vehicle purchases, and all new executive vehicle purchases, will be zero-emission vehicles or hybrids.</p> <p>Use telematics analysis to right-size fleet (number of vehicles, class of vehicles) and decarbonize on-road vehicles suitable for conversion from</p>		<p>Greenhouse gas emissions from fleet in fiscal year 2005–06 (base year) remains the same at 8.2 ktCO<sub>2</sub>e</p> <p>Greenhouse gas emissions from fleet in fiscal year 2020-21 = 2.57 ktCO<sub>2</sub>e</p> <p>Percentage (%) reduction in greenhouse gas emissions from fleet from fiscal year 2005-06 to fiscal year 2020-21 = 68% (2005 – 1,313 vehicles, 2021 – 869 vehicles)</p>	<p>Greenhouse gas emissions can be reduced by reducing fuel consumption, by increasing usage of low-carbon transportation solutions, and by replacing conventional fossil-fueled vehicles over their lifetimes with zero-emission vehicles and hybrids.</p> <p>SDG 12 - Responsible Consumption and Production</p>

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		<p>conventional fossil fuel to zero-emission vehicles and hybrids.</p> <p>Promote behavior change (e.g., through anti-idling campaigns, driver training, increased pooling of vehicles, and reducing elective employee travel).</p> <p>Augment infrastructure in support of plug-in electric vehicles.</p>		<p>Telematics were deployed in 774 vehicles and electric vehicle charging stations at 13 research centres in support of 21 plug-in electric vehicles continue to be maintained</p> <p>Trained 815 employees in Green Defensive Driving</p> <p>Replaced 80 older, less fuel-efficient vehicles with new, more fuel-efficient vehicles</p>	
Divert at least 75% (by weight) of non-hazardous operational waste from landfills by 2030	Other	<p>Track and disclose waste diversion rates by 2022 for applicable Agriculture and Agri-Food Canada custodial facilities.</p> <p>Complete a pilot project at an Agriculture and Agri-Food Canada research center to optimize the reduction and diversion of waste, and develop lessons learned.</p> <p>Implement waste reduction measures at custodial facilities on a priority basis, where services exist, where the quantity of waste warrants it, and as waste contracts are renewed.</p>	<p><b>Performance indicator:</b></p> <p>Percentage of non-hazardous operational waste diverted (based on a rolling average of the mass of diverted waste, divided by the total mass of waste)</p> <p><b>Starting point:</b></p> <p>39% from fiscal years 2007-08 to 2016-17</p> <p>Based on annualized data from latest waste audits for the four Agriculture and Agri-Food Canada custodial facilities which meet the Treasury Board Secretariat reporting requirements</p> <p><b>Target:</b></p> <p>75% by 2030-31</p>	<p><b>Result:</b> The first reporting year for waste diversion rates will be 2022-23</p> <p>Waste audits were not conducted in 2020-21 and the pilot project was postponed due to the COVID-19 pandemic</p> <p>A national waste management study was completed for AAFC sites across the country to gain information on current practices and recommendations</p> <p>New waste-hauling clauses were developed to track weights of waste removed from sites and were included in 3 new contracts</p>	<p>Actions that reduce the generation of non-hazardous operational waste will help to reduce indirect Scope 3 greenhouse gas emissions for the production, transport and disposal of material.</p> <p>Diverting waste from landfill reduces landfill gas and transport hauling emissions.</p> <p>Material recovery via recycling reduces emissions for the extraction and production of virgin materials.</p> <p>SDG 12 - Responsible Consumption and Production</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
Divert at least 75% (by weight) of plastic waste from landfills by 2030	Other	<p>Track and disclose plastic waste diversion rates by 2022 for applicable Agriculture and Agri-Food Canada custodial facilities.</p> <p>Promote the elimination of unnecessary use of single-use plastics in departmental operations, events and meetings.</p> <p>When procuring products that contain plastics, promote the procurement of sustainable plastic products, and the reduction of associated plastic packaging waste.</p>	<p><b>Performance indicator:</b> Percentage of plastic waste diverted (based on a rolling average of the mass of diverted plastic waste, divided by the total mass of plastic waste)</p> <p><b>Starting point:</b> 25% from fiscal years 2007-08 to 2016-17</p> <p>Based on annualized data from latest waste audits for the four Agriculture and Agri-Food Canada custodial facilities which meet the Treasury Board Secretariat reporting requirements</p> <p><b>Target:</b> 75% by 2030-31</p>	<p><b>Result:</b> The first reporting year on plastic diversion rates will be 2022-23</p> <p>Waste audits were not conducted in 2020-21 due to the COVID-19 pandemic; therefore, diversion rates are not available for 2020-21</p> <p>The National Waste Management Study (noted above) included a review of plastic waste</p>	<p>Actions that reduce the generation of plastic waste will help to reduce indirect Scope 3 greenhouse gas emissions for the production, transport and disposal of material.</p> <p>Diverting waste from the landfill reduces landfill gas and transport waste hauling emissions.</p> <p>Material recovery via recycling reduces emissions for the extraction and production of virgin materials.</p> <p>SDG 12 - Responsible Consumption and Production</p>
Divert at least 90% (by weight) of all construction and demolition waste from landfills (striving to achieve 100% by 2030)	Other	Track and disclose construction and demolition waste diversion rates by 2022 for applicable custodial infrastructure projects.	<p><b>Performance indicator:</b> Percentage of construction and demolition waste diverted (based on the mass of diverted construction and demolition waste, divided by the total mass of construction and demolition waste, for applicable projects in a given fiscal year)</p> <p><b>Starting point:</b> No starting point is available</p> <p><b>Target:</b></p>	<p><b>Result:</b> The first reporting year on waste diversion rates will be in 2022-23</p>	<p>Actions that reduce the generation of construction and demolition waste will help to reduce indirect Scope 3 greenhouse gas emissions for the production, transport, and disposal of material.</p> <p>Diverting waste from the landfill reduces landfill gas and transport waste hauling emissions.</p> <p>Material recovery via recycling reduces emissions for the extraction and production of virgin materials.</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
			90% by 2030-31, striving to achieve 100%  Metrics follow Treasury Board Secretariat reporting requirements		SDG 12 - Responsible Consumption and Production
Our administrative fleet will be comprised of at least 80% zero-emission vehicles by 2030	Fleet management will be optimized including by applying telematics to collect and analyze vehicle usage data on vehicles scheduled to be replaced	Ensure that 75% of new light-duty unmodified administrative fleet vehicle purchases will be zero-emission vehicles or hybrids. Ensure that all new executive vehicle purchases will be zero-emission vehicles or hybrids.	<b>Performance indicators:</b> <ul style="list-style-type: none"> <li>Percentage of annual administrative fleet purchases that are zero-emission or hybrid vehicles (where more than one option exists)</li> <li>Percentage of zero-emission or hybrid vehicles in overall administrative fleet</li> <li>Percent of annual executive vehicle purchases that are zero-emission or hybrid</li> </ul> <b>Starting points:</b> <ul style="list-style-type: none"> <li>100% in 2018-19</li> <li>6% in 2018-19</li> <li>No starting point is available</li> </ul> <b>Targets:</b> <ul style="list-style-type: none"> <li>75% by 2020-21</li> <li>80% by 2030-31</li> <li>100% by 2020-21</li> </ul>	Result: in 2020-21, 100% of annual administrative fleet purchases were zero-emission or hybrid vehicles (12 hybrids, 10 plug-in electric vehicles)  In 2021, 11% of the overall administrative fleet were zero-emission  In 2021, 100% of the annual executive vehicle purchases were zero-emission or hybrid (1 executive vehicle)	Greenhouse gas emissions can be reduced by reducing fuel consumption, by increasing usage of low-carbon transportation solutions, and by replacing conventional fossil-fueled vehicles over their lifetimes with zero-emission vehicles and hybrids.  SDG 12 - Responsible Consumption and Production
By 2022, departments have developed measures to reduce climate change risks to assets, services and operations	Increase training and support on assessing climate change impacts, undertaking climate change risk assessments and developing adaptation actions to public service	Take action to understand the wide range of climate change impacts that could potentially affect departmental custodial assets and operations.	<b>Performance indicators and targets:</b> <ul style="list-style-type: none"> <li>Climate change risk assessment of departmental custodial assets and</li> </ul>	<b>Result:</b> To promote a consistent Government of Canada approach, Public Services and Procurement Canada (PSPC) leads the development of the central terms of reference and	Factoring climate variability and change into operations is an important way the government can adapt to a changing climate. It is also consistent with the government's risk management

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
	employees, and facilitate sharing of best practices and lessons learned.		<p>operations completed by 2021</p> <ul style="list-style-type: none"> <li>Measures are developed to reduce climate change risks to departmental custodial assets, and operations by 2022</li> <li>Agriculture and Agri-Food Canada's next Five Year Investment Plan, expected in 2022, incorporates consideration of climate change mitigation and adaptation measures</li> </ul> <p><b>Starting points:</b> No starting points are available</p>	<p>consultant standing offers for departments to assess their unique climate change risks.</p> <p>In 2021, due to the impacts of the COVID-19 pandemic, PSPC has only recently established the standing offers and the climate change risk assessments of departmental custodial assets and operations have not yet been completed. However, AAFC is now in the process of accessing these services and can start achieving progress towards this performance indicator</p>	<p>approach of enhancing the protection of public assets and resources, and strengthening planning and decision-making.</p> <p>SDG 13 – Climate Action</p>
	By 2021, adopt climate-resilient building codes being developed by National Research Council Canada	Integrate climate change adaptation into the design and construction of all major real property projects in conformance with applicable building codes.	<p><b>Performance indicator:</b> Percentage of major real property projects completed in the reporting year that conform to the applicable National Research Council Canada climate-resilient building codes in place at the design stage.</p> <p><b>Starting point:</b> No starting point is available.</p> <p><b>Target:</b> 100% by 2020-21</p>	Results are not available for 2020-21. AAFC will continue to consult with National Research Council Canada on their progress toward development of the climate-resilient building codes	<p>Early adoption of the codes in the construction of buildings demonstrates federal leadership in climate resilient buildings.</p> <p>SDG 13 – Climate Action</p>
Use 100% clean electricity by 2025	Other	Participate and support the Clean Electricity Procurement Initiative led by Public Services and Procurement Canada on behalf of	<p><b>Performance indicator:</b> Percentage of clean electricity (based on electricity consumption from non-emitting sources, including renewable energy</p>	<p><b>Result:</b> Percentage of clean electricity in fiscal year 2019-20 (provided by Treasury Board Secretariat based on most recently available data) = 73.4%</p>	<p>The use of clean electricity eliminates greenhouse gas emissions in jurisdictions with emitting generation sources.</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
		<p>federal departments and agencies.</p> <p>Continue to procure 35% green electricity from renewable energy sources for Alberta facilities until at least December 2021.</p>	<p>certificates, divided by the total electricity consumption in the fiscal year</p> <p><b>Starting point:</b> 73% in 2018-19 (provided by Treasury Board Secretariat based on 2017 provincial electricity grids)</p> <p><b>Target:</b> 100% in 2025-26</p>	<p>PSPC continue to negotiate contracts for clean electricity and AAFC will participate as appropriate</p> <p>As part of an Alberta bulk electricity contract led by Public Services and Procurement Canada, AAFC purchased 44.5% green electricity from renewable energy sources at its Alberta facilities in 2020-21</p>	<p>SDG 12 - Responsible Consumption and Production</p> <p>SDG 7 – Affordable and Clean Energy</p>
<p>Actions supporting the Goal: Greening Government</p> <p>[This section is for actions that support the Greening Government Goal but do not <b>directly</b> support a FSDS target]</p>	<p>Departments will use environmental criteria to reduce the environmental impact and ensure best value in government procurement decisions</p>	<p>Integrate environmental considerations into procurement management processes and controls.</p> <p>Promote and leverage common use procurement instruments and tools that incorporate environmental considerations where available and feasible.</p>	<p><b>Performance indicators:</b></p> <ul style="list-style-type: none"> <li>Percentage of procurement files reviewed by the Procurement Review Board (PRB) that contemplated environmental considerations for applicable commodities in a given fiscal year</li> <li>Inclusion of environmental considerations in procurements valued over \$2 million</li> </ul> <p><b>Starting points:</b></p> <ul style="list-style-type: none"> <li>42% in 2018-19 (based on submissions with a value of \$100,000 or greater)</li> <li>100% in 2018-19 (only one file in 2018-19 was valued at over \$2 million, and it incorporated green considerations)</li> </ul>	<p><b>Result:</b> in 2020-21, 57% of procurement files for all commodities reviewed by the Procurement Review Board (PRB) included environmental considerations.</p> <p><b>Result:</b> in 2020-21, 81% of procurements valued over \$2 million included environmental considerations</p>	<p>Green procurement incorporates environmental considerations into purchasing decisions and is expected to motivate suppliers to reduce the environmental impact of the goods and services they deliver, and their supply chains.</p> <p>SDG 12 - Responsible Consumption and Production</p>



FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
			<b>Targets:</b> <ul style="list-style-type: none"> <li>• 50% in each fiscal year</li> <li>• 50% in each fiscal year</li> </ul>		
	Departments will use environmental criteria to reduce the environmental impact and ensure best value in government procurement decisions	Ensure key officials include contribution to and support for the Policy on Green Procurement objectives in their performance evaluations.	<b>Performance indicator:</b> Number of functional heads (Director General and Director) of procurement and material whose performance evaluation includes support and/or contribution towards green procurement  <b>Starting point:</b> Two positions (100%): Director General, Real Property and Asset Management, and Director, Material Management, in 2018-19  <b>Target:</b> 100% in each fiscal year	<b>Result:</b> in 2020-21, 100% (2) of functional heads (Director General and Director) of procurement and material whose performance evaluation includes support and/or contribution towards green procurement	Green procurement incorporates environmental considerations into purchasing decisions and is expected to motivate suppliers to reduce the environmental impact of the goods and services they deliver, and their supply chains.  SDG 12 - Responsible Consumption and Production Target 12.7
	Departments will use environmental criteria to reduce the environmental impact and ensure best value in government procurement decisions	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.	<b>Performance indicator:</b> Percentage reduction in business travel emissions, relative to 2005-06 fiscal year  <b>Starting points:</b> 60% reduction in 2018-19 (3.7 ktCO <sub>2</sub> e) relative to 2005-06 (9.2 ktCO <sub>2</sub> e)  <b>Target:</b> Maintain at least 35% reduction until 2020-21 relative to 2005-06	<b>Result:</b> in 2020-21, as a result of the COVID-19 pandemic, a 99% reduction in business travel emissions was maintained, relative to the 2005-06 fiscal year	Green procurement incorporates environmental considerations into purchasing decisions and is expected to motivate suppliers to reduce the environmental impact of the goods and services they deliver, and their supply chains.  SDG 12 - Responsible Consumption and Production Target 12.7

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	Departments will adopt clean technology and undertake clean technology demonstration projects	<p>Explore opportunities to participate in the Innovation Solutions Canada Testing Stream.</p> <p>Develop operational innovation proposals for the Greening Government Fund.</p>	<p><b>Performance indicators and targets:</b></p> <ul style="list-style-type: none"> <li>Participation in Innovation Solutions Canada's Testing Stream if matching proposals exist, during 2020-23</li> <li>Participation in Greening Government Fund initiative during 2020-23</li> </ul> <p><b>Starting points:</b> No starting points are available</p>	<p><b>Result:</b> in 2020-21, AAFC participated in 6 Innovation Solutions Canada's Testing Streams</p> <p><b>Result:</b> in 2020-21, AAFC submitted projects for consideration to participate in the Greening Government Fund Initiative. One project received approval, however the feasibility study determined it was not feasible to pursue it further at this time. AAFC will continue to explore opportunities for operational innovation proposals</p>	<p>Incent, support, or procure state-of-the-art innovative clean technologies that lower the environmental footprint of government operations while contributing to the success of clean-tech businesses in Canada.</p> <p>SDG 7 – Affordable and Clean Energy</p> <p>SDG 8 – Decent Work and Economic Growth</p>
	Support for green procurement will be strengthened, including guidance, tools and training for public service employees	Ensure decision makers, material management and specialists in procurement have the necessary training and awareness to support green procurement.	<p><b>Performance indicator:</b> Percentage of specialists in procurement (PG employees) who have completed training on green procurement, as of March 31 of each fiscal year</p> <p><b>Starting point:</b> 63% in 2018-19</p> <p><b>Target:</b> 65% in each fiscal year</p>	<p><b>Result:</b> In 2020-21, 60% of the Department's 43 specialists in procurement (employees classified in the Purchasing and Supply group (PG) positions) were trained in green procurement as of March 31</p>	<p>Green procurement incorporates environmental considerations into purchasing decisions and is expected to motivate suppliers to green their goods, services and supply chain.</p> <p>SDG 12 - Responsible Consumption and Production Target 12.7</p>
<p><u>1</u> Kiloton of carbon dioxide equivalent</p>					

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## Context: 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 for our economy. Canadian farmers and ranchers are responsible stewards of the land, and they continue to be part of the climate change solution. Through improved management practices, land-use decisions, and the provision of raw materials for biofuels and bioproducts, the agriculture sector has the potential to support Canada's greenhouse gas reduction commitment. Additional measures introduced through the Government of Canada Strengthened Climate Plan and in Budget 2021, including those increasing the adoption of clean technology, supporting the development and implementation of natural climate solutions on-farm, and targeting emissions from fertilizer use, will also support the sector's efforts to reduce its greenhouse gas emissions.

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

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, such as increased risks from pests, drought, and flooding, and in better addressing water and soil conservation and development issues. For example, the [Agricultural Greenhouse Gases Program](#) supported projects that create technologies, practices and processes that can be adopted by farmers to mitigate greenhouse gas emissions. An agroforestry project focusing on mitigation of greenhouse gases through a riparian buffer system worked with 24 private landowners to establish 6.8 km of riparian tree buffers during the 2019-20 reporting period. In total, 30,600 trees were planted in riparian tree buffers, which mitigates GHG emissions through carbon sequestration within the watershed.



**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

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
By 2030, reduce Canada's total GHG emissions by 30%, relative to 2005 emission levels	Develop a solid base of scientific research and analysis on climate change	Continue to fund the Agricultural Greenhouse Gases Program until March 31, 2021 which supports projects that conduct research and increase knowledge on mitigating greenhouse gas emissions in four key priority areas: livestock systems; cropping systems; agricultural water use efficiency; and agroforestry.	<p><b>Performance indicator:</b> Total number of peer-reviewed publications published under the current Agricultural Greenhouse Gases Program (2017-21)</p> <p><b>Starting point:</b> 48 as of 2018-19</p> <p><b>Target:</b> Cumulative target of 140 by March 31, 2021</p>	<p><b>Result:</b> As of March 31, 2021, a cumulative total of 134 peer reviewed publications were published since the beginning of the Agricultural Greenhouse Gases Program (note: this represents all results for 2017-18 to 2019-20, and results reported to date for the 2020-21 fiscal year)</p>	<p><b>FSDS:</b> Research under this program will support an increased understanding and knowledge of the chemical, physical, and biological processes that lead to greenhouse gas emissions from agricultural systems into surface water, ground water, and the atmosphere. Developing a solid research base creates the foundation for Canada's agricultural sector to contribute to an overall reduction in Canada's greenhouse gas emissions.</p> <p><b>Contribution to United Nations (UN) Sustainable Development Goals (SDG):</b> SDG 2: Zero hunger SDG 13: Climate action</p>
By 2030, reduce Canada's total GHG emissions by 30%, relative to 2005 emission levels	Develop a solid base of scientific research and analysis on climate change	Conduct targeted research to increase knowledge of climate change relative to agriculture.	<p><b>Performance indicator:</b> The number of scientific articles related to climate change accepted for publication through an external peer-reviewed process</p> <p><b>Starting point:</b></p>	<p><b>Result:</b> As of March 31, 2021, 1324 additional articles were accepted under the current Canadian Agriculture Partnership policy framework (2018-23)</p>	<p>Agriculture and Agri-Food Canada's scientific research addresses key challenges and opportunities facing agricultural production, and informs the development of departmental and broader government policies regarding adaptation to climate risk. The development of climate change research increases knowledge by the scientific community in the area of climate</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
			<p><b>1,494</b> articles under the previous Growing Forward 2 policy framework (2013-18) <input type="checkbox"/></p> <p><b>Target:</b> At least <b>1,200</b> additional articles under the current Canadian Agricultural Partnership policy framework (2018-23)</p>		<p>change mitigation and adaptation in agriculture.</p> <p>SDG 2: Zero hunger</p> <p>SDG 13: Climate action</p>
<p>By 2030, reduce Canada's total GHG emissions by 30%, relative to 2005 emission levels</p>	<p>Support businesses and Canadians in taking action to reduce greenhouse gas emissions</p>	<p>Work with provinces and territories through the Canadian Agricultural Partnership to build the capacity of Canada's agriculture, agri-food and agri-based products sector to encourage all aspects of the sector to adopt sustainable agricultural practices and beneficial management practices at farm and regional levels, with the central focus of reducing greenhouse gas emissions and the effects of climate change.</p>	<p><b>Performance indicators:</b></p> <ol style="list-style-type: none"> <li>1. Number of environmental risk assessments (e.g., Environmental Farm Plans or equivalent) developed or updated</li> <li>2. Number of on-farm beneficial management practices projects completed</li> <li>3. Number of agri-food processor beneficial management practices projects completed</li> </ol> <p><b>Starting points:</b> Starting points based on the 2018-19 fiscal year are as follows:</p> <ol style="list-style-type: none"> <li>1. <b>8,117</b></li> <li>2. <b>4,234</b></li> <li>3. <b>14</b></li> </ol>	<p><b>Result 1:</b> As of March 31, 2020, 13,148 environmental risk assessments (for example, Environmental Farm Plans or equivalent) were either developed or updated</p> <p><b>Result 2:</b> As of March 31, 2020, 10,406 on-farm beneficial management practices projects were completed</p> <p><b>Result 3:</b> As of March 31, 2020, 91 agri-food processor beneficial management practices projects were completed</p> <p>(Provincial and territorial reporting data is 1-year behind)</p>	<p>Programming under the Canadian Agricultural Partnership aims to increase the awareness and knowledge of beneficial management practices and climate change. It also aims to increase the adoption of practices and technologies to improve environmental performance, adapt to climate change, and reduce the greenhouse gas emissions of the Canadian agriculture and agri-food sector.</p> <p>SDG 2: Zero hunger</p> <p>SDG 8: Decent work and economic growth</p> <p>SDG 13: Climate action</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
			<p><b>Targets:</b></p> <p>Cumulative targets to achieve by March 31, 2023<sup>2</sup> are as follows:</p> <ol style="list-style-type: none"> <li>1. <b>11,885</b></li> <li>2. <b>21,374</b></li> <li>3. <b>94</b></li> </ol>		
Other actions supporting the goal: Effective Action on Climate Change	Other	Continue to implement the Agricultural Greenhouse Gases Program which promotes environmentally responsible agriculture and supports the development of approaches and tools that assist the agriculture sector in mitigating greenhouse gas emissions.	<p><b>Performance indicator:</b></p> <p>Number of newly developed technologies and beneficial management practices demonstrated through field days and workshops</p> <p><b>Starting point:</b></p> <p><b>49</b> under the previous Agricultural Greenhouse Gases Program (2011-16)</p> <p><b>Target:</b></p> <p><b>50 additional</b> by March 31, 2021 under the current Agricultural Greenhouse Gases Program (2017-21)</p>	<p><b>Result:</b></p> <p>As of March 31, 2021, the Agricultural Greenhouse Gases Program has developed and demonstrated a total of 25 new technologies and beneficial management practices to farmers since the beginning of the program in 2017</p> <p>(note: this represents all results for 2017-18 to 2019-20, and results reported to date for the 2020-21 fiscal year)</p> <p>This result falls short of the target of 50 that was set for the program. Many of the demonstration events that had been planned to take place in the final year of the program were not able to do so as a result of the COVID-19 pandemic</p>	<p>The Agricultural Greenhouse Gases Program 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>By making such information, practices and technologies available to farmers, the program will ultimately contribute to the mitigation of greenhouse gas emissions and other positive longer-term environmental impacts for Canada. In turn, this will support the Government of Canada's commitments to the environment and to climate change.</p> <p>SDG 2: Zero hunger</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
					SDG 8: Decent work and economic growth SDG 13: Climate action
Other actions supporting the goal: Effective Action on Climate Change	Other	<p>Develop a departmental climate action plan that outlines measures to mitigate climate change risks to department operations and programs, as a follow-up to the departmental climate change risk assessment completed in 2019. The action plan will address the following priority actions:</p> <ul style="list-style-type: none"> <li>Assess climate change risks to departmental assets by 2021 (see associated adaptation target in the Greening Government section of this DSDS).</li> <li>Further incorporate climate change into departmental processes through future risk management process and develop indicators for sector climate resilience in collaboration with partners.</li> <li>Continue to assess climate change impacts on business risk management programs.</li> </ul> <p>Enhance staff communication related to departmental climate risks.</p>	<p><b>Performance indicator:</b> A climate action plan is developed to report and track progress on measures to reduce climate change risks to the department's areas of responsibility (programs and operations)</p> <p><b>Starting point:</b> Departmental climate change risk assessment completed in 2019</p> <p><b>Target:</b> By 2022, develop a departmental climate action plan</p>	<b>Result:</b> Results will be reported by 2022	<p>Understanding climate change risks to departmental operations and programs will allow adaptation measures to be planned and implemented effectively. This will entail increased training and support on assessing climate change impacts, undertaking climate change risk assessments and developing adaptation actions for public service employees, and facilitating the sharing of best practices and lessons learned.</p> <p>SDG 13: Climate action</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
<p><a href="#">1</a> The Canadian Agricultural Partnership is AAFC's current policy framework, representing a \$3 billion five-year investment by federal, provincial and territorial governments to strengthen and grow Canada's agriculture and agri-food sector. This policy framework is in place from 2018 to 2023, succeeding the previous framework known as Growing Forward 2 from 2013 to 2018.</p> <p><a href="#">2</a> Under the Canadian Agricultural Partnership, provinces and territories set both annual targets and 5-year targets. Annual targets cannot be changed but cumulative targets for March 31, 2023 may be revised annually by the provinces and territories. The cumulative 5-year targets were adjusted as of June 30, 2020 from 1) 11, 885 to 14,166, 2) 21,374 to 21,085 and 3) 94 to 118.</p>					



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## Context: Sustainable Food

Collective action by Agriculture and Agri-Food Canada and its partners contributes 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 Canadian Agricultural Partnership includes actions that support this goal. One priority area of the Partnership highlights environmental sustainability and climate change, focusing on building sector capacity to reduce agricultural greenhouse gas emissions, protect the environment and adapt to climate change while increasing production. As an example under the [Agrilnnovate Program](#), one company established a state-of-the-art production facility to produce insect-based feed ingredients, which increases the production of sustainable, nutritious products to feed animals, while helping to keep food out of landfills. The company uses recycled food waste from local farms, grocery stores and food production facilities to feed the insects, which are then dried and processed into animal feed ingredients and fertilizer for plants.

In 2019-20, Agriculture and Agri-Food Canada launched the Food Policy for Canada, which has a vision that, "all people in Canada are able to access a sufficient amount of safe, nutritious, and culturally diverse food. Canada's food system is resilient and innovative, sustains our environment and supports our economy." The 2020 to 2023 DSDS for Agriculture and Agri-Food Canada sets out specific targets in relation to the implementation of the Food Policy, including delivery of the [Local Food Infrastructure Fund](#) and the launch of the [Food Waste Reduction Challenge](#). In 2020-21, as a result of the COVID-19 pandemic, additional performance indicators and targets have been added under the Local Food Infrastructure Fund and [Surplus Food Rescue Program](#) to reflect the specific objectives of funding announced for emergency food programming.



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

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
Actions supporting the goal: Sustainable Food	Make healthier food choices easier	Deliver the Local Food Infrastructure Fund which supports local food projects, such as those at food banks and community gardens across Canada, to provide at-risk populations, such as the less privileged and isolated communities, with improved access to healthy foods through investments in infrastructure.	<p><b>Performance indicator:</b> Number of small-scale (less than \$50,000) and large-scale (greater than \$50,000) infrastructure investments</p> <p><b>Starting point:</b> Initiative was launched in June 2019. In 2019–20, 362 infrastructure investments were approved</p> <p><b>Target:</b> 1630 (1495 small investments + 135 large investments) – to be achieved by March 2024</p>	<p><b>Result:</b> In 2020-21, 319 small-scale and 53 large-scale infrastructure investments were made</p> <p>Cumulative target: 734 infrastructure investments</p>	<p><b>FSDS:</b> As organizations make increased investments in local food infrastructure, their capacity to provide healthy and nutritious food to the most vulnerable populations will increase. This increase in capacity will lead to an increased availability of healthy and nutritious food within these communities across Canada.</p> <p><b>Contribution to United Nations (UN) Sustainable Development Goals (SDG):</b> SDG 2: Zero hunger</p>
Actions supporting the goal: Sustainable Food	Make healthier food choices easier	Deliver the Emergency Food Security Fund which provides funding to Canadian food banks and other national food rescue organizations to help improve access to food for people experiencing food insecurity in Canada due to the COVID-19 pandemic. <sup>1</sup>	<p><b>Performance indicator:</b> Number of local food service organizations that receive food or funding through the program</p> <p><b>Starting point:</b> This is a new initiative launched in the wake of the COVID-19 pandemic. As of December 31, 2020, 3220 local food organizations receive food or funding</p> <p><b>Target:</b></p>	<p><b>Result:</b> As of March 31, 2021, 3,725 projects led to local food organizations receiving food or funding</p> <p>Note that some recipients received funding through more than 1 project, especially between the 2 rounds of Emergency Food Security funding, so the number of projects does not indicate the number of unique local food organizations that received food or funding</p>	<p>The funding will be used to purchase and distribute food and to hire workers where volunteers are unavailable and buy personal protective equipment to help keep workers, volunteers, and visitors at food banks and local food organizations safe. This increase in funding will lead to an increased availability of healthy and nutritious food available during the pandemic.</p> <p>SDG 2: Zero hunger</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
			A target has not been set for this indicator		
Actions supporting the goal: Sustainable Food	Make healthier food choices easier	Deliver the Surplus Food Rescue Program which aims to move surplus food commodities, caused by COVID-19's significant disruption to the Canadian food system, to food banks and other food security organizations in communities across Canada. <a href="#">2</a>	<p><b>Performance indicator:</b> Volume and value of excess food rescued</p> <p><b>Starting point:</b> This is a new initiative launched in the wake of the COVID-19 pandemic. As of December 31, 2020, 7.3 million kg of food totalling \$38.4 million was rescued</p> <p><b>Target:</b> A target has not been set for this indicator</p>	<p><b>Result:</b> As of March 31, 2021, 7.8 million kg of excess food totalling \$41.2 million has been rescued</p>	<p>The program provides assistance to organizations serving vulnerable populations to acquire and process surplus commodities and food that would otherwise be lost or destroyed and distribute them to populations in need.</p> <p>SDG 2: Zero hunger</p> <p>SDG 12: Responsible consumption and production</p>
Actions supporting the goal: Sustainable Food	Other	Develop and launch the Food Waste Reduction Challenge which will accelerate the implementation of innovative and concrete actions to reduce food waste in Canada.	<p><b>Performance indicator:</b> Number of challenges issued for innovative ideas to reduce food waste</p> <p><b>Starting point:</b> This is a new initiative announced in June 2019</p> <p><b>Target:</b> Minimum of one challenge issued by December 31, 2020</p>	<p><b>Result:</b> The target was met as streams A &amp; B of the challenge were issued by December 31, 2020. These streams focus on solutions that provide an innovative way of doing business to reduce food waste across any or multiple stages of the food supply chain</p>	<p>Issuing challenges will attract new ideas and resources for solving the complex problems of food waste in Canada. New collaborations among non-traditional partners and problem solvers will be developed, which will build capacity and facilitate the development of new innovations that help advance sustainability efforts by reducing and preventing food waste across the Canadian food supply chain. This will decrease greenhouse gas emissions and increase food availability. Not only will a winning innovative solution be identified,</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
					<p>but each challenge will result in attracting multiple innovations that will help reduce food waste in Canada.</p> <p>SDG 12: Responsible consumption and production</p>
<p>Actions supporting the goal: Sustainable Food</p>	<p>Increase knowledge supporting sustainable agriculture, fisheries and aquaculture</p>	<p>Conduct research to increase knowledge on the environmental effects of agriculture, including ways the sector can help protect the environment.</p>	<p><b>Performance indicator:</b></p> <p>The number of scientific articles related to nutrient cycling, soil quality, and water resources/quality, that are accepted for publication through an external peer-reviewed process</p> <p><b>Starting point:</b></p> <p>The starting points based on the previous Growing Forward 2 policy framework (2013-18), are as follows:</p> <ul style="list-style-type: none"> <li>• Nutrient cycling: 600</li> <li>• Soil quality: 1,500</li> <li>• Water resources/quality: 2,000</li> </ul> <p><b>Targets:</b></p> <p>The targets to achieve under the current Canadian Agricultural Partnership policy framework (2018-23) are as follows:</p> <ul style="list-style-type: none"> <li>• Nutrient cycling: 600</li> </ul>	<p><b>Result:</b> In 2020-21,</p> <ul style="list-style-type: none"> <li>• 868 scientific articles related to nutrient cycling</li> <li>• 1637 scientific articles related to soil quality</li> <li>• 699 scientific articles related to water resources/quality</li> </ul> <p>were accepted for publication through an external peer-reviewed process under the current Canadian Agriculture Partnership policy framework (2018-23)</p>	<p>Scientific research undertaken by Agriculture and Agri-Food Canada, in collaboration with federal, provincial, and non-government organization partners, serves to make agricultural production more sustainable as scientific knowledge leads to the development of practices and processes that can be adopted in Canada. Conducting research thus 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>Peer-reviewed publications can be viewed at <a href="#">Agricultural Research Results</a>.</p> <p>SDG 2: Zero hunger</p> <p>SDG 12: Responsible consumption and production</p> <p>SDG 15: Life on land</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
			<ul style="list-style-type: none"> <li>• Soil quality: 1,500</li> <li>• Water resources/quality: 2,000</li> </ul>		
Actions supporting the goal: Sustainable Food	Other	Establish fora to facilitate strategic industry-government collaboration on key environmental issues facing the sector, such as a Sustainability Table.	<p><b>Performance indicator:</b> Frequency of meetings</p> <p><b>Starting point:</b> Inaugural meeting of the Sustainability Table will take place in 2020</p> <p><b>Target:</b> Six in-person meetings by March 31, 2023</p>	<b>Result:</b> In 2020-21, 3 virtual meetings (replacing in-person meetings) of the Sustainability Table took place, including the inaugural meeting on December 10, 2020	<p>These collaborative fora will support the long-term resilience and sustainability of the Canadian agriculture and agri-food sector through engagement with members from the food value chain, including to inform departmental policies and programs that promote and support sustainable agriculture practices and agri-food products.</p> <p>SDG 2: Zero hunger SDG 12: Responsible consumption and production SDG 15: Life on land</p>
By 2030, support improvement in the environmental performance of the agricultural sector by achieving a score of 71 or higher for the Index of Agri-Environmental Sustainability (reflecting the quality of the water, soil, air and biodiversity)	Other	Assess and report on the collective environmental impact of the adoption of sustainable agriculture practices by farmers on the Canadian landscape.	<p><b>Performance indicator:</b> Index of Agri-Environmental Sustainability score</p> <p><b>Starting point:</b> 65 (based on 2011 data)</p> <p><b>Target:</b> 71 or higher by 2030</p> <p>Data from specific indicator models will be available for industry and provinces to assess sustainability levels every year by</p>	<p><b>Result:</b> No new data is available to report on the target to achieve a result of 71 or higher</p> <p>The data is based on the Census of Agriculture, which has a 5-year lag. The results of the 2016 Census will be available in May 2021. The Index is expected to be updated by December 2021</p>	<p>Regular reporting on the environmental sustainability of Canadian agriculture provides an indication of the overall stability of the agricultural working environment, which assesses nutrient management, as well as the quality of water, soil, air, and biodiversity.</p> <p>Monitoring the agriculture sector's environmental sustainability helps federal, provincial, and non-government partners to assess whether their policies are effective in helping the sector take actions to minimize</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
			<p>2023. Analysis of trends for indicator models will be available every two years beginning in 2023.</p> <p>See the <a href="#">Agri-Environmental Indicator Report Series – Report #4</a></p>		<p>environmental risks, and use inputs efficiently.</p> <p>SDG 2: Zero hunger</p> <p>SDG 12: Responsible consumption and production</p> <p>SDG 15: Life on land</p>
Grow Canada's agri-food exports to \$75 billion per year by 2025	Promote innovation and secure our position as a preferred agri-food supplier to high-value markets	Track the value of agriculture and agri-food exports to measure the sector's contribution to Canada's economic growth.	<p><b>Performance indicator:</b></p> <p>Value of agriculture and agri-food exports</p> <p><b>Starting point:</b></p> <p>\$66.2 billion in 2018-2019</p> <p><b>Target:</b></p> <p>At least \$75 billion by March 2025</p>	<b>Result:</b> In 2020-21, the value of Canadian agriculture and agri-food exports was \$73.9 billion	<p>Tracking the value of Canadian agriculture and agri-food exports will help assess the sector's ability to compete in the global marketplace and to efficiently respond to consumer and market trends for sustainable food. The Canadian agriculture and agri-food sector will be more innovative, resilient, competitive, and environmentally sustainable to help maintain access to existing markets and open new markets, creating opportunities for economic growth.</p> <p>SDG 2: Zero hunger</p> <p>SDG 12: Responsible consumption and production</p> <p>SDG 15: Life on land</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
Grow Canada's agri-food exports to \$75 billion per year by 2025	Promote innovation and secure our position as a preferred agri-food supplier to high-value markets	Accelerate the demonstration, commercialization, and/or adoption of innovative agri-based products, technologies, processes, or services that increase the competitiveness and sustainability of the agriculture and agri-food sector, by continuing to fund the AgrilInnovate Program.	<p><b>Performance indicator:</b></p> <p>Percentage increase in the dollar value of annual export revenues of participating firms</p> <p><b>Starting point:</b></p> <p>148% based on only nine participating firms reporting from 2015-19 under the previous program</p> <p><b>Target:</b></p> <p>168% by March 28, 2028 under the current AgrilInnovate program (2018-23)</p>	<p><b>Result:</b> As of 2020-21, the dollar value of annual export revenues of participating firms increased by 154%, with 4 of the 22 projects reporting preliminary results</p>	<p>This program is intended to address the financing gap present between moving agricultural, agri-food and agri-based research to commercialization, and to assist industry in mitigating the risk inherent in scaling-up products, processes, services, and technologies. This program supports agricultural, agri-food, and agri-based businesses in being innovative and sustainable, and strengthens their ability to compete in the global economy.</p> <p>SDG 2: Zero hunger</p> <p>SDG 3: Good health and well-being</p>
Grow Canada's agri-food exports to \$75 billion per year by 2025	Promote innovation and secure our position as a preferred agri-food supplier to high-value markets	Build the capacity of Canada's agriculture, agri-food, and agri-based products sector to promote innovation through the generation and commercialization of new technologies.	<p><b>Performance indicators:</b></p> <p>The number of new technologies (products, practices, processes, and systems) that:</p> <ul style="list-style-type: none"> <li>• Are developed</li> <li>• Are assessed under research conditions</li> <li>• Are demonstrated on-farm or in-plant</li> <li>• Attain IP protection</li> <li>• Are utilized</li> </ul> <p><b>Starting points:</b></p> <p>Based on the 2018-19 fiscal year, the number of new technologies (products, practices, processes, and systems):</p>	<p><b>Result:</b> As of March 31, 2020, 868 new technologies were developed</p> <p>970 new technologies were assessed under research conditions</p> <p>712 new technologies were demonstrated on-farm or in-plant</p> <p>149 number of new technologies attained intellectual property (IP) rights protection</p> <p>540 new technologies were utilized</p> <p>(Provincial and territorial reporting data is 1-year behind)</p>	<p>Collective action by Agriculture and Agri-Food Canada and its federal, provincial, territorial, 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. This includes by providing programming support that promotes innovation through the generation and commercialization of new agriculture and agri-food technologies.</p> <p>SDG 2: Zero hunger</p> <p>SDG 8: Decent work and economic growth</p>

FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
			<ul style="list-style-type: none"> <li>• 475</li> <li>• 410</li> <li>• 219</li> <li>• 97</li> <li>• 213</li> </ul> <p><b>Targets:</b></p> <p>Cumulative targets to achieve under the current Canadian Agricultural Partnership policy framework (2018-23)<sup>3</sup> are as follows: —</p> <ul style="list-style-type: none"> <li>• 1,183</li> <li>• 735</li> <li>• 1,227</li> <li>• 72</li> <li>• 1,300</li> </ul> <p>The five-year target for the number of new technologies attaining IP protection was surpassed in the first year of reporting.</p>		



FSDS targets	FSDS contributing actions	Corresponding departmental actions	Starting points Performance indicators Targets	Results achieved	Contribution by each departmental result to the FSDS goal and target
Grow Canada's agri-food exports to \$75 billion per year by 2025	Promote innovation and secure our position as a preferred agri-food supplier to high-value markets	Provide programming support to the provinces and territories through the Canadian Agricultural Partnership to build the capacity of Canada's agriculture, agri-food, and agri-based products sector to promote innovation by bringing awareness to new market opportunities through the development and dissemination of market intelligence.	<p><b>Performance indicator:</b></p> <p>Number of market information and intelligence products created, updated, or disseminated by type of Industry.</p> <p><b>Starting point:</b></p> <p>411 for the 2018-19 fiscal year</p> <p><b>Target:</b></p> <p>Cumulative target of 2,073 by 2022-23<sup>4</sup></p>	<p><b>Result:</b></p> <p>As of March 31, 2020, 1,353 market information and intelligence products were created, updated, or disseminated</p> <p>(Provincial and territorial reporting data is 1-year behind)</p>	<p>Generic and customized information and intelligence supports the sector in assessing market opportunities. Capitalizing on market opportunities, including high-value market opportunities, is not only innovative but necessary in expanding the domestic and international market presence of Canada's agriculture and agri-food sector, and in securing Canada's position as a preferred agri-food supplier.</p> <p>SDG 2: Zero hunger</p> <p>SDG 8: Decent work and economic growth</p>
<p><sup>1</sup> As a result of the COVID-19 pandemic, AAFC announced \$200 million in emergency food programming (\$100 million in April 2020 and an additional \$100 million, of which \$65M is to be delivered through the Emergency Food Security Fund, in October 2020) and \$50 million for a Surplus Food Rescue Program to support vulnerable Canadians experiencing food insecurity as a result of the pandemic. Additional performance indicators and targets have been added under the Local Food Infrastructure Fund and Surplus Food Rescue Program to reflect the specific objectives of the funding.</p> <p><sup>2</sup> Under the Canadian Agricultural Partnership, provinces and territories set both annual targets and 5-year targets. Annual targets cannot be changed but cumulative targets for March 31, 2023 may be revised annually by the provinces and territories. The cumulative 5-year targets were adjusted as of June 30, 2020 from 1) 11, 885 to 14,166, 2) 21,374 to 21,085 and 3) 94 to 118.</p> <p><sup>3</sup> Under the Canadian Agricultural Partnership, provinces and territories set both annual targets and 5-year targets. Annual targets cannot be changed but cumulative targets for March 31, 2023 may be revised annually by the provinces and territories. The cumulative 5-year targets were adjusted as of June 30, 2020 from 1) 1,183 to 1,036; 2) 735 to 806; 3) 1,227 to 1,251; 4) 72 to 149; 5) 1,300 to 1,239.</p> <p><sup>4</sup> Under the Canadian Agricultural Partnership, provinces and territories set both annual targets and 5-year targets. Annual targets cannot be changed but cumulative targets for March 31, 2023 may be revised annually by the provinces and territories. The cumulative 5-year target was adjusted as of June 30, 2020 from 2,073 to 2,236.</p>					

## 4. Report on integrating sustainable development

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. Sustainable agriculture contributes to sector profitability by safeguarding the land's productive capacity now and into the future, and by reducing operating costs through increased efficiencies. It also enhances the reputation of the sector and producers as good stewards of the land, and it helps to maintain access to existing markets or 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.

Agriculture and Agri-Food Canada invests in a more sustainable agriculture and agri-food sector by supporting innovation and on-farm action. This includes, for example, supporting the completion of on-farm environmental risk assessments and providing incentives to producers 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, cost-shared between both orders of government, and delivered by provincial or territorial agencies.

The Canadian Agricultural Partnership (the Partnership), launched on April 1, 2018, is a five-year, \$3-billion investment by federal, provincial and territorial governments to help the agriculture and agri-food sector ensure continued innovation and growth, as well as address priority environmental issues related to water, soil, air, biodiversity, and climate change. Under the Partnership, up to \$436 million is available for cost-shared programs between federal and provincial/territorial governments that are designed to raise producers' awareness of environmental risks, and accelerate the adoption of on-farm technologies and practices to reduce these risks, including through improved manure management and storage, precision farming practices for fertilizer use and nutrient management plans, among others. In addition to the Partnership, the Department funds ongoing environment-focused science projects through the Department's Science and Technology Branch – all of which have contributed to improvements in the sector's environmental performance.

As part of the Government's Strengthened Climate Plan, A Healthy Environment and a Healthy Economy, the Government of Canada is also investing more than \$4 billion over the next 10 years to establish a Natural Climate Solutions Fund and to support activities to build a more resilient economy and a healthier, greener future.

The Natural Climate Solutions Fund includes \$185 million for the [Agricultural Climate Solutions Program](#), announced in March 2021, which is a 10-year program that will help develop and implement better farming practices so farmland can increase the amount of stored carbon and reduce GHG emissions. The Agricultural Climate Solutions program will establish a Canada-wide network of Living Labs, which are regional collaborations between farmers, scientists, and other stakeholders to develop and disseminate beneficial management practices that sequester carbon and provide other environmental co-benefits in agricultural landscapes.

In particular, Budget 2021, presented on April 19, 2021, included the announcement of additional funding of \$200 million over the next two years to launch immediate, on-farm climate action under the Agricultural Climate Solutions program. This will target projects accelerating emission reductions by improving nitrogen management, increasing adoption of cover cropping, and normalizing rotational grazing.

Under the Strengthened Climate Plan, the Government is also investing \$165.7 million over seven years in an enhanced [Agricultural Clean Technology Program](#) (ACT). The ACT will support the agriculture industry in developing transformative clean technologies, and will help farmers adopt commercially available clean technology. Within this program, \$50 million will focus on grain-drying technologies and \$10 million will focus on powering farms with clean energy.

Canada will also establish a national emission reduction target for fertilizers, with the aim of reducing emissions of nitrous oxide to 30 % below 2020 levels by 2030. The Government will work with fertilizer manufacturers, farmers, provinces and territories, to develop an approach to meet this new target.

Agriculture and Agri-Food Canada also conducts and supports research and development activities that contribute to the sustainable growth of the sector. This includes, for example, improving resource and input use efficiency (land, water, and nutrients) by developing beneficial management practices and precision agriculture technologies (variable rate irrigation or robotic feeding systems). Department-led innovation and programming plays a significant role in addressing water, soil conservation, and biodiversity issues, and in reducing the greenhouse gas emissions of the sector. Some investments contribute to broader clean growth objectives by providing solutions to other sectors for the reduction of greenhouse gas emissions; for example, using agricultural biomass to produce electricity or fuels.

Agriculture and Agri-Food Canada will continue to ensure that its decision-making process includes consideration of Federal Sustainable Development Strategy goals and targets through its strategic environmental assessment process.

During the 2020-21 reporting cycle, Agriculture and Agri-Food Canada considered the environmental effects of initiatives subject to the Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals, as part of its decision-making processes. The Department systematically applies strategic environmental assessment to strategic proposals submitted to the Minister or Cabinet for approval that may result in important environmental effects, either positive or negative.

The process generally comprises 3 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, would result from the implementation of the proposal
3. Detailed strategic environmental assessment – a more detailed analysis of environmental effects, including mitigation measures that could reduce or eliminate potential adverse effects or enhance potential environmental benefits

Preliminary scans and detailed strategic environmental assessments for policy, plan, or program proposals include an analysis of the impacts of the given proposal on the environment, including on the FSDS goals and targets. The results of departmental detailed assessments are made public for initiatives that are approved or announced (please see [the Strategic Environmental Assessment](#)). The purpose of the public statement is to demonstrate that the environmental effects of the approved policy, plan, or program, including the impacts on achieving the FSDS goals and targets, have been appropriately considered during proposal development and decision making.

During 2020-21, Agriculture and Agri-Food Canada achieved its strategic environmental assessment commitments, including by:

- Maintaining a database to track and facilitate reporting on strategic environmental assessments.
- Evaluating the impacts of strategic proposals submitted to the Minister or Cabinet, on the FSDS goals and targets. The Department's proposals can have direct and indirect linkages to a broad range of goals and targets under the FSDS. For example, programming that promotes innovation and encourages adoption of sustainable agricultural practices at farm and landscape level, contributes to the Sustainable Food goal of the FSDS.

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Out of the 27 initial reviews completed, 16 proposals either had no associated environmental effects, or were considered a special case under the Cabinet Directive, in that they had been previously assessed; 12 proposals required a preliminary scan level assessment, and 2 proposals warranted the completion of a detailed strategic environmental assessment.