

Supplementary Information  
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2022–23 Departmental  
Results Report

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## Reporting on green procurement

This supplementary information table supports reporting on green procurement activities in accordance with the [\*Policy on Green Procurement\*](#).

### Context

Although the Canadian Space Agency (CSA) was not bound by the [\*Federal Sustainable Development Act\*](#) in 2022–23 and is not required to develop a full 2020–23 Departmental Sustainable Development Strategy (DSDS), the CSA adheres to the principles of the Federal Sustainable Development Strategy (FSDS) by complying with the [\*Policy on Green Procurement\*](#).

The *Policy on Green Procurement* supports the Government of Canada’s efforts to promote environmental stewardship. In keeping with the objectives of the policy, the CSA supports sustainable development by integrating environmental performance considerations into the procurement decision-making process through the actions described in the 2019 to 2022 FSDS “Greening Government” goal.



**Commitments**

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

FSDS target	FSDS contributing action(s)	Corresponding departmental action(s)	Starting point(s), performance indicator(s), target(s)	Results achieved	Contribution by each departmental result to the FSDS goal and target
<p><b>1.</b> Actions supporting the Greening Government goal and the <i>Policy on Green Procurement</i></p>	<p><b>1.1.</b> Departments will use environmental criteria to reduce the environmental impact and ensure best value in government procurement decisions.</p>	<p><b>1.1.1.</b> Establish the current situation for goods and services purchased:</p> <ul style="list-style-type: none"> <li>Analyze procurement patterns to identify the main goods and services purchased and their environmental impacts.</li> <li>Set departmental targets to reduce the environmental impact of the most relevant goods and services.</li> </ul>	<p><b>Starting point:</b> Baseline data not available.</p> <p><b>Performance indicator:</b> Departmental targets are identified.</p> <p>Target: By 2023–24,<sup>1</sup> departmental targets will be identified.</p> <p><small>1 The initial target date was the end of 2022–23. Due to delays caused by the COVID-19 pandemic, the date has been changed to end of 2023–24.</small></p>	<p>In 2022–23:</p> <ul style="list-style-type: none"> <li>Procurement pattern has been analyzed.</li> </ul> <p>The CSA’s purchasing profile was analyzed and departmental goals will be established by 2023–24.</p>	<p><b>FSDS:</b> These actions will help to support the FSDS goal of greening government by reducing the Government of Canada’s (GC) greenhouse gas (GHG) emissions intensity from goods and services purchases and ensure best value in government procurement decisions.</p> <p>Also, incorporating green procurement environmental</p>

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		<p><b>1.1.2.</b> Implement a Green Procurement Directive to structure the integration of environmental considerations into our procurement processes.</p>	<p><b>Starting point:</b> 2019  <b>Performance indicators:</b>                      Implementation of the policy on greening procurement.                      Target: The directive on greening procurement will be published by 2022–23.</p>	<p>The directive on greening procurement was drafted and is ready to be approved.</p>	<p>considerations into purchasing decisions is expected to encourage suppliers to reduce the environmental impact of the goods and services they deliver, and their supply chains.                      Finally, including environmental considerations into the CSA procurement instruments, management processes, controls and tools will contribute to transitioning to a low-carbon economy, in addition to supporting the <i>Policy on Green Procurement</i>.  <b>UN SDG:</b></p> <ul style="list-style-type: none"> <li>• 12: Responsible consumption and production.</li> </ul> <p>12.7: Promote public procurement practices that are sustainable, in accordance with national policies and priorities.</p>
		<p><b>1.1.3.</b> Integrate environmental factors in contracts and purchasing management controls, as well as in commonly used procurement tools.</p>	<p><b>Starting point:</b> Baseline data not available.  <b>Performance indicator</b>                      Percentage (%) of contracts which include environmental considerations (e.g., reduce, reuse, or include environmental criteria).  <b>Target:</b> 50% of contracts will include environmental considerations by 2022.</p>	<p>Every contract request has been reviewed to verify if environmental factors must be considered. However, an exact percentage is not available. Actions are ongoing to establish a data collection plan for the CSA’s procurement reporting requirements.</p>	

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		<p><b>1.1.4.</b> Include criteria that address carbon reduction, sustainable plastics and broader environmental benefits into procurement for goods and services with environmental impacts.</p>	<p><b>Starting point:</b> Baseline data not available.  <b>Performance indicator:</b> Percentage (%) of requests for proposals that include environmental criteria.  <b>Target:</b> 25% of requests for proposals will include environmental criteria by 2023–24.</p>	<p>In 2022–23: Environmental criteria were included in all the applicable mechanisms.</p> <p>The exact percentage of procurement processes that include environmental factors is not yet available. Actions are ongoing to establish a data collection plan for the CSA’s procurement reporting requirements.</p>	

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	<p><b>1.2.</b> Support for green procurement will be strengthened, including guidance, tools and training for public service employees.</p>	<p><b>1.2.1.</b> Ensure that decision makers, credit card holders, material managers, and employees with procurement and contracting responsibilities undergo compulsory Green Procurement training.</p>	<p><b>Starting point:</b> 100% of procurement officers and credit card holders had taken the Canada School Public Service (CSPS) Green Procurement Course (2020–21).</p> <p><b>Performance indicators:</b></p> <ul style="list-style-type: none"> <li>• Percentage (%) of procurement officers and materiel management functional specialists that have taken the course;</li> <li>• Percentage (%) of all acquisition card holders that have taken the course.</li> </ul> <p><b>Target:</b></p> <ul style="list-style-type: none"> <li>• Starting in 2021, 100% of new procurement officers and material managers will take the course.</li> <li>• Starting in 2021, 100% of new acquisition card holders will be required to complete the course in order to receive a card.</li> </ul>	<p>In 2022–23: 100% of the procurement officers and material management functional specialists have taken the mandatory course. 100% of new acquisition card holders have taken the mandatory course.</p>	<p><b>FSDS:</b> This will ensure that the environmental impact considerations are integrated through procurement processes, and that employees are incentivized to use goods and services that have low environmental impacts.</p> <p>UN SDG:</p> <ul style="list-style-type: none"> <li>• 12: <a href="#">Responsible consumption and production</a>.</li> </ul>

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	<p><b>1.3.</b> Departments will adopt clean technology and undertake clean technology demonstration projects.</p>	<p><b>1.3.1.</b> CanmetENERGY Varennes and the CSA have developed an operational innovation proposal, a collaborative and experimental project under the Greening Government Fund.</p> <p>(see FSDS contributing action <b>2.3.</b>)</p>	<p><b>Starting point:</b> The project started in 2020–21.</p> <p><b>Performance indicators:</b></p> <ul style="list-style-type: none"> <li>• Approval of the Greening Government Fund;</li> <li>• Implementation of the Clean-tech partnership;</li> <li>• Date the project is implemented, and data is available for analysis (see FSDS contributing actions <b>2.2.</b>).</li> </ul> <p><b>Target:</b> The experimental project will be implemented by the end of 2022–23.</p>	<p>In 2020–21, the clean tech project was approved by the Greening Government Fund, and the partnership between the CSA and NRCan was formalized.</p> <p>The project was implemented in 2021–22 and 2022–23, which provided the data required to proceed with the results analysis phase.</p>	<p><b>FSDS:</b> Actions by individual departments that incentivize, support, or procure state-of-the-art innovative clean technologies will contribute to lowering the environmental footprint of the government operations while contributing to the success of clean-tech businesses in Canada.</p> <p><b>UN SDGs:</b></p> <ul style="list-style-type: none"> <li>• 9: <a href="#">Industry, innovation and infrastructure</a>;</li> <li>• 11: <a href="#">Sustainable cities and communities</a>;</li> <li>• 13: <a href="#">Climate action</a>.</li> </ul>



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<p><b>2.</b> Reduce greenhouse gas emissions from federal government facilities and fleets by 40% by 2030 (with an aspiration to achieve this target by 2025) and 80% below 2005 levels by 2050 (with an aspiration to be carbon neutral).</p>	<p><b>2.1.</b> 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.</p>	<p><b>2.1.1.</b> In order to decarbonize its property portfolio, the CSA will:</p> <ul style="list-style-type: none"> <li>• Complete a carbon-neutral evaluation of the David Florida Laboratory, the portfolio’s second major building.</li> <li>• Establish and develop the implementation strategy for the measures identified in the headquarters’ carbon neutrality study.</li> <li>• Continue to disclose and monitor its GHG emissions and energy consumption for each facility using the RETScreen software.</li> </ul>	<p><b>Starting points:</b> Total GHG emissions for facilities in 2005–2006 (base year): 2.413 ktCO<sub>2</sub>e</p> <p><b>Performance indicators:</b> GHG emissions from facilities in the current reporting fiscal year = [Y] ktCO<sub>2</sub>e</p> <p>GHG emissions from facilities in base year = [X] ktCO<sub>2</sub>e</p> <p>Percentage (%) change in GHG emissions from facilities from base year to current reporting fiscal year = <math>[(1-Y)/X]\%</math></p>	<p>In 2022–23: GHG emissions from facilities in the current reporting fiscal year = 1.046 ktCO<sub>2</sub>e</p> <p>GHG emissions from facilities in 2005–2006 = 2.413 ktCO<sub>2</sub>e</p> <p>Percentage (%) change in GHG emissions from facilities from base year to current reporting fiscal year = -56%</p>	<p><b>FSDS:</b> All of these actions will allow the CSA to reduce its GHG emissions related to the operation of its building portfolio and to invest in low-carbon renovations. Thus, the CSA will contribute to the reduction of total GHG emissions related to the operation of federal buildings and ensure that the reduction targets set by the Government of Canada are met.</p> <p><b>UN SDGs:</b></p> <ul style="list-style-type: none"> <li>• 7: <a href="#">Affordable and clean energy</a>;</li> <li>• 9: <a href="#">Industry, innovation and infrastructure</a>;</li> <li>• 11: <a href="#">Sustainable cities and communities</a>;</li> <li>• 13: <a href="#">Climate action</a>.</li> </ul>

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	<p><b>2.2.</b> Fleet management will be optimized, including by applying telematics to collect and analyze vehicle usage data on vehicles scheduled to be replaced.</p>	<p><b>2.2.1.</b> The CSA will take actions to decarbonize its fleet by:</p> <ul style="list-style-type: none"> <li>• Purchasing hybrid or zero-emission vehicles (ZEVs) when replacing a vehicle.</li> <li>• Optimizing its fleet management decision with data collection and the use of telematics.</li> </ul>	<p><b>Starting points:</b> Total GHG emissions for fleet in 2005–06 (base year): 0 ktCO<sub>2e</sub>.</p> <p><b>Performance indicators:</b></p> <ul style="list-style-type: none"> <li>• GHG emissions from fleet in current reporting fiscal year = [Y] ktCO<sub>2e</sub></li> <li>• GHG emissions from fleet in base year = [X] ktCO<sub>2e</sub></li> <li>• Percentage (%) change in GHG emissions from fleet from base year to current reporting fiscal year = [(1–Y)/X]%</li> </ul>	<p>In 2022–23:</p> <ul style="list-style-type: none"> <li>• GHG emissions from fleet in current reporting fiscal year = 0.0182 ktCO<sub>2e</sub></li> <li>• GHG emissions from fleet in base year = 0 ktCO<sub>2e</sub></li> </ul> <p>The percentage change in GHG emissions from fleet between base year and current year is not representative because the CSA did not own any vehicles in 2005–06.</p>	<p><b>FSDS:</b> By replacing conventional gasoline vehicles with ZEVs or hybrids, the CSA will help reduce total GHG emissions from federal operations.</p> <p>UN SDGs:</p> <ul style="list-style-type: none"> <li>• 7: <a href="#">Affordable and clean energy</a>;</li> <li>• 11: <a href="#">Sustainable cities and communities</a>;</li> <li>• 12: <a href="#">Responsible consumption and production</a>;</li> <li>• 13: <a href="#">Climate action</a>.</li> </ul>

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	<p><b>2.3.</b> Departments will adopt and deploy clean technologies, implement procedures to manage building operations and take advantage of programs to improve the environmental performance of their buildings.</p>	<p><b>2.3.1.</b> The CSA will report on its clean technology project in collaboration with CanmetENERGY Varennes (RNCAN), adopted to improve the environmental performance of the CSA’s Space Centre with advanced control strategies to optimize the controls of the heating, ventilation and air-conditioning (HVAC) systems. The goals are to reduce energy consumption and costs, peak electrical loads, natural gas usage and GHG emissions.</p>	<p><b>Starting points:</b> Total GHG emissions for 2005–06 (base year): 2.413 ktCO<sub>2</sub>e</p> <p><b>Performance indicators:</b></p> <ul style="list-style-type: none"> <li>• Percentage (%) change in GHG emissions at the CSA’s Space Centre from fiscal year prior to the project (2020–21) and the implementation fiscal year (2023–24);</li> <li>• Percentage (%) change in natural gas consumption in cubic metres (m<sup>3</sup>) at the John H. Chapman Space Centre from fiscal year prior to the project (2020–21) and the implementation fiscal year (2023–24).</li> </ul>	<p>In 2022–23: The CSA reduced the GHG emissions from real estate operations of the John H. Chapman Space Centre (headquarters) by 224 tCO<sub>2</sub>, a reduction of 32.4% compared to the level of 2020–21 due to optimized control of heating, ventilation and air-conditioning systems.</p> <p>Percentage (%) change in natural gas consumption in cubic metres (m<sup>3</sup>) at the John H. Chapman Space Centre (headquarters) represented a reduction of 33% compared to the level of 2020–21.</p>	<p><b>FSDS:</b> Understanding and testing the range of applications for clean technology in building operations will raise awareness about clean technology opportunities in the built environment and ultimately reduce greenhouse gas emissions, in addition to supporting more efficient production and consumption.</p> <p><b>UN SDGs:</b></p> <ul style="list-style-type: none"> <li>• 9: <a href="#">Industry, innovation and infrastructure</a>;</li> <li>• 11: <a href="#">Sustainable cities and communities</a>;</li> <li>• 13: <a href="#">Climate action</a>.</li> </ul>

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			<ul style="list-style-type: none"> <li>• Percentage (%) change in electricity consumption (kWh) at the John H. Chapman Space Centre from fiscal year prior to the project (2020–21) and the implementation fiscal year (2023–24);</li> <li>• Percentage (%) change in energy consumption (GJ) cost at the CSA’s Space Centre from fiscal year prior to the project (2020–21) and the implementation fiscal year (2023–24).</li> </ul> <p><b>Target:</b> 40% reduction in total GHG emissions from CSA facilities and fleets from 2005–06 levels by 2030, with an aspiration to achieve this by 2025.</p>	<p>Percentage (%) change in electricity consumption in kilowatt-hours (kWh) at John H. Chapman Space Centre represented a 17% increase from the 2020–21 level. The increase is due to the return to office policy following the COVID-19 pandemic.</p> <p>The percentage (%) change in the cost of energy consumption in gigajoules (GJ) over the past five years at John H. Chapman Space Centre between fiscal year 2020–21 and 2022–23 represented a 5% increase. The increase is due to the return to office policy following the COVID-19 pandemic.</p> <p>John H. Chapman Space Centre’s total energy consumption increased by 2.6%, compared to the 2020–21 level. The increase is due to the return to office policy following the COVID-19 pandemic.</p>	

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<p><b>3.</b> Our administrative fleet will be comprised of at least 80% zero-emission vehicles by 2030.</p>	<p><b>3.1.</b> Fleet management will be optimized, including by applying telematics to collect and analyze vehicle usage data on vehicles scheduled to be replaced.</p>	<p><b>3.1.1.</b> Promoting the purchase of hybrid or ZEVs when replacing a vehicle in the CSA fleet.</p> <p><b>3.1.2.</b> Using telematics analysis as a decision-making tool when selecting a vehicle and optimizing fleet management.</p> <p><b>3.1.3.</b> Promoting behavioural change to encourage eco-driving.</p>	<p><b>Starting point:</b></p> <ul style="list-style-type: none"> <li>In 2019–20, 20% of the CSA’s fleet were ZEVs or hybrid vehicles.</li> <li>100% of vehicles were connected via telematics.</li> <li>100% of new unmodified light administrative vehicle purchases from the fleet are ZEVs or hybrid.</li> </ul> <p><b>Performance indicators:</b></p> <ul style="list-style-type: none"> <li>Total number of vehicles in administrative fleet;</li> <li>Percentage (%) of ZEVs in administrative fleet;</li> <li>Percentage of annual administrative fleet purchases that are ZEVs or hybrid;</li> <li>Percentage of vehicles logged via telematics.</li> </ul> <p><b>Targets:</b></p> <ul style="list-style-type: none"> <li>75% of new light-duty unmodified administrative fleet vehicle purchases will be ZEVs or hybrid.</li> <li>80% of the fleet will be ZEVs or hybrid by 2030.</li> <li>100% of vehicles logged via telematics.</li> </ul>	<p>In 2022–23:</p> <ul style="list-style-type: none"> <li>No new acquisition;</li> <li>40% of the fleet are ZEVs or hybrid;</li> <li>0% of vehicles logged via telematics.</li> </ul>	<p><b>FSDS:</b> As conventional gasoline-powered vehicles are replaced over their lifetimes with ZEVs and the size of the fleet is optimized, a greater proportion of the CSA’s fleet will be ZEVs. This will contribute to making the government’s administrative vehicle fleet at least 80% ZEVs by 2030.</p> <p><b>UN SDGs:</b></p> <ul style="list-style-type: none"> <li>7: <a href="#">Affordable and clean energy</a>;</li> <li>11: <a href="#">Sustainable cities and communities</a>;</li> <li>12: <a href="#">Responsible consumption and production</a>;</li> <li>13: <a href="#">Climate action</a>.</li> </ul>

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<p><b>4.</b> By 2022, departments will have developed measures to reduce climate change risks to assets, services and operations.</p>	<p><b>4.1.</b> Increase training and support on assessing climate change impacts, undertaking climate change risk assessments and developing adaptation actions for public service employees, and facilitate sharing of best practices and lessons learned.</p>	<p><b>4.1.1.</b> The CSA is taking action to assess the wide range of climate change impacts that could affect its assets, services, and operations by conducting a climate change risk assessment. Measures will be developed according to results and recommendations.</p> <p>Hence, the CSA will initiate discussions to see how climate change can be included in business continuity planning, departmental risk planning or equivalent processes, as well as to look at integrating future climate change conditions and adaptation into projects starting with design, construction and operations aspects of real property or engineered asset projects.</p>	<p><b>Starting point:</b> 2020  <b>Performance indicators:</b>                      Completion of the departmental climate risk assessment;                      Completion of the development of measures to reduce risks related to assets, services and operations related to climate change.  <b>Targets:</b>                      Climate risk assessment will be completed by the end of 2020–21.                      Climate change risk reduction measures will be developed by the end of 2020–21.</p>	<p>In 2022–23:                      Climate risk assessment was completed.                      Climate change risk reduction measures have been developed.</p>	<p><b>FSDS:</b> Factoring climate variability and change into policy, programs, and operations is one of the most important ways the government can adapt and be resilient to a changing climate.</p> <p>UN SDG:                      13 : <a href="#">Climate action</a>.</p>

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<p><b>5.</b> Use 100% clean electricity by 2025.</p>	<p><b>5.1.</b> Additional action</p>	<p><b>5.1.1.</b> The CSA will participate in government initiatives to purchase megawatt hours of renewable electricity for its sites that are located where electrical grids still emit carbon. The goal is for the CSA to have 100% of its sites supplied by clean electricity.</p>	<p><b>Starting point:</b> 96% clean electricity use in 2018–19.  <b>Performance indicators:</b></p> <ul style="list-style-type: none"> <li>• Electricity consumption during the year = [X] kWh;</li> <li>• Electricity consumption from non-emitting sources (including renewable energy certificates) during the year = [Y] kWh;</li> <li>• Percentage (%) of clean electricity = [Y/X]%.                      Target: 100% clean electricity use by 2025.</li> </ul>	<p>In 2022–23:                      97% of electricity used by the CSA was clean.</p>	<p><b>FSDS:</b> The use of clean electricity eliminates GHG emissions in jurisdictions where electricity generation is not from clean renewable sources.</p> <p><b>UN SDGs:</b></p> <ul style="list-style-type: none"> <li>• 7: <a href="#">Affordable and clean energy</a>;</li> <li>• 12: <a href="#">Responsible consumption and production</a>;</li> <li>• 13: <a href="#">Climate action</a>.</li> </ul>

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<p><b>6.</b> Divert at least 75% (by weight) of non-hazardous operational waste from landfills by 2030.</p>	<p><b>6.1.</b> Additional action</p>	<p><b>6.1.1.</b> The CSA is working to renew its waste management program to increase the rate of diversion of operational and plastic waste, by:</p> <ul style="list-style-type: none"> <li>• Testing new infrastructure for the collection of organic material by the end of 2022–23 at the head office.</li> <li>• Improving tracking and reporting of waste quantity and diversion rates by 2023–24, including through the RETScreen software.</li> <li>• Continuing the single-use mask recycling program in the context of the COVID-19 pandemic.</li> </ul>	<p><b>Starting points:</b></p> <p>Headquarters: Non-hazardous operational waste diversion rate is 36.81% for 54.29 tons of waste produced (2018–19).</p> <p>David Florida Laboratory: Non-hazardous operational waste diversion rate is 56.81% for 3.73 tons of waste produced (2019–20).</p> <p><b>Performance indicator:</b> Percentage (%) by weight of non-hazardous operational waste diverted.</p> <p><b>Target:</b> Divert at least 75% by weight of non-hazardous operational waste from landfills by 2030.</p>	<p>In 2022–23: The CSA diverted 48% by weight of non-hazardous operational waste from landfills.</p>	<p><b>FSDS:</b> By tracking, diverting and reducing its waste, the CSA contributes to reducing scope 3 GHG emissions created by waste generation, transportation and disposal. This also allows the CSA to collaborate with its suppliers, thus contributing to the transition in the industry.</p> <p><b>UN SDG:</b></p> <ul style="list-style-type: none"> <li>• 12: <a href="#">Responsible consumption and production</a>.</li> </ul> <p>12.5: By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.</p>



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<p>7. Divert at least 75% (by weight) of plastic waste from landfills by 2030.</p>	<p>7.1. Additional action</p>	<p>7.1.1. Continue efforts to include criteria in our procurement to reduce the purchase of plastic containers and promote the use of more environmentally friendly and sustainable alternatives.</p>	<p><b>Starting points:</b></p> <p>Headquarters:</p> <ul style="list-style-type: none"> <li>Plastic waste diversion rate is 35.99% for 2.92 tons of waste produced (2018–19).</li> </ul> <p>David Florida Laboratory:</p> <ul style="list-style-type: none"> <li>Plastic waste diversion rate is 22.74% for 0.129 tons of waste produced (2019–20).</li> </ul> <p><b>Performance indicator:</b> Percentage (%) by weight of plastic waste diverted.</p> <p><b>Target:</b> Divert at least 75% (by weight) of plastic waste from landfills by 2030.</p>	<p>In 2022–23:<sup>1</sup> The CSA diverted at least 30% of plastic waste from landfills.</p> <p><sup>1</sup> These results include all facilities surveyed in the waste audits conducted in 2018–2019 and 2019–2020. The results are valid for a period of 5 years</p>	

### **Report on integrating sustainable development**

The CSA will continue to ensure that its decision-making process includes consideration of FSDS goals and targets through its strategic environmental assessment (SEA) process. A SEA for a policy, plan or program proposal includes an analysis of the impacts of the proposal on the environment, including on relevant FSDS goals and targets.

Public statements on the results of the CSA's assessments are shared when an initiative has undergone a detailed SEA (see [here](#)). The purpose of the public statement is to demonstrate that the environmental effects, including the impacts on achieving the FSDS goals and targets, of the approved policy, plan or program have been considered during proposal development and decision-making.

During the 2022–23 reporting cycle, the CSA had no proposals that required a strategic environmental assessment and no public statements were produced.

## Details on transfer payment programs

### Contributions under the Canada / European Space Agency (ESA) Cooperation Agreement

**Start date:** The renewed Agreement was signed on February 12, 2019, and ratified on June 13, 2019. The revised Terms and Conditions were approved in April 2019, and became effective on November 26, 2019.

**End date:** January 1, 2030 (end date of the Agreement)

**Type of transfer payment:** Contribution

**Type of appropriation:** Annually through Estimates

**Fiscal year for terms and conditions:** The revised Terms and Conditions for the contributions, under the 2020–30 Cooperation Agreement, were approved, and became effective in 2019–20.

**Link to departmental result(s):** Canada's investments in space benefit the Canadian economy.

**Link to the department's Program Inventory:** Space Capacity Development Program (SCDP)

#### Purpose and objectives of transfer payment program:

- Enhance Canadian industry's technological base and provide access to European markets for value-added products and services in the fields of Earth observation (EO), telecommunications, navigation, space exploration and generic technological activities.
- Foster the participation of Canadian academia in missions and enable the demonstration of Canadian space technologies in:
  - European microgravity, and
  - Space exploration missions and programs.

This is achieved through a financial contribution by the CSA to the ESA optional programs.

#### Results achieved:

Result #1: **Science, research and development opportunities**

Performance indicator:

- Number of scientific investigations, research and development or demonstration projects funded.

Result achieved: 119 scientific investigations, research and development or demonstration projects were funded in 2022–23.

Performance indicator:

- Overall industrial return coefficient for Canada (ratio between the actual value of contracts awarded by the ESA to Canadian organizations and the ideal value of contracts awarded by the ESA to Canadian organizations).

Result achieved: For the period of January 1, 2015 to March 31, 2023, Canada has achieved a return coefficient of 0.95. This is higher than the minimum guaranteed by ESA to its Member States by the end of December 2024, i.e. 0.93.

Since the coefficient is cumulative, it can only be seen as preliminary as it will continue to fluctuate during the period. The result will get closer to the ideal value of 1 as the statistical period

progresses. Canada's return coefficient indicates its successfulness in obtaining its fair share of ESA contracts as part of the Canada – ESA Cooperation Agreement.

Result #2: Space research and development advances science, technologies, applications and expertise.

Performance indicator #1:

- Number of scientific activities and technologies that have advanced their Technology Readiness Level (TRL) or Application Readiness Level (ARL).

Result achieved: 56 scientific activities and technologies have advanced their readiness level in 2022–23 as their associated projects were completed with success. The target of 4 technologies for 2022–23 was surpassed because of the harmonization of the calculation methodology for this indicator with other programs at the CSA.

Performance indicator #2:

- Number of students involved in projects.

Result achieved: 83 post-secondary students involved during 2022–23.

Performance indicator #3:

- Number of early-career professionals involved in projects.

Result achieved: 73 early-career professionals involved during 2022–23.

Performance indicator #4:

- Number of highly qualified personnel involved in projects.

Result achieved: 422 highly qualified persons involved during 2022–23.

Result #3: Canadian space sector know-how is demonstrated.

Performance indicator #1:

- Number of space missions with Canadian astronauts and/or Canadian content.

Result achieved: 4 space missions in operation during 2022–23 contained Canadian technologies as reported per the supported projects.

Performance indicator #2:

- Number of technologies supported by the SCDP that are contenders for future missions.

Result achieved: 32 technologies in 2022–23 are considered contenders or selected for future missions.

Performance indicator #3:

- Number of technologies that were tested/validated and scientific experiments that were performed in an analogue deployment or in a suborbital environment.

Result achieved: 6 technologies in 2022–23 were tested or validated in an analogue deployment or in a suborbital environment which means they have reached a Technology Readiness Level (TRL) of 7 or higher on a scale of 9.

Result #4: Canadian space sector is developed and well positioned.

Performance indicator #1:

- Number of Canadian organizations involved in projects.

Result achieved: 55 distinct Canadian organizations were involved in projects during 2022–23.

Result #5: Canadian space sector is competitive.

Performance indicator #1:

- Number of Canadian technologies/products that have flown and/or have been space-qualified as a result of Canada’s participation in ESA.

Result achieved: One technology has flown in 2022–23 as it has embarked on a space mission. The current target for the 2020–2030 period is 8 technologies. The current total, including the 2022–23 result, stands at 5 technologies that have flown and/or have been space-qualified as a result of Canada’s participation in ESA activities.

Performance indicator #2:

- Value of follow-on contracts obtained by Canadian organizations on European and global markets.

Result achieved: The sum of the reported value of follow-on contracts obtained by Canadian organizations as a result of completing their projects was established at \$15,104,222.

**Findings of audits completed in 2022–23:** N/A

**Findings of evaluations completed in 2022–23:** An evaluation was started in June 2022 and will be completed in December 2023. Findings are not available at the time of this report.

**Engagement of applicants and recipients in 2022–23:** The CSA continued to actively consult the Canadian space sector (industry and academia) and the other Government of Canada organizations as part of the activities and projects selection process.

**Financial information (dollars)**

Type of transfer payment	2020–21 Actual spending	2021–22 Actual spending	2022–23 Planned spending	2022–23 Total authorities available for use	2022–23 Actual spending (authorities used)	Variance (2022–23 actual minus 2022–23 planned)
<b>Total contributions</b>	50,810,467	50,152,192	37,672,000	47,955,601	47,439,179	9,767,179
<b>Total program</b>	50,810,467	50,152,192	37,672,000	47,955,601	47,439,179	9,767,179

**Explanation of variance**

The variance is due to an internal reallocation of resources from the grants and contributions vote to the European Space Agency (ESA) for additional payments to the ESA.

**Class Grant and Contribution Program to Support Research, Awareness and Learning in Space Science and Technology**

**Start date:** October 1, 2009

**End date:** N/A — Ongoing program

**Type of transfer payment:** Grant and Contribution

**Type of appropriation:** Annually through Estimates.

**Fiscal year for terms and conditions:** 2009–10

**Link to departmental result(s):**

- Canada remains a leading space-faring nation
- Space information and technologies improve the lives of Canadians
- Canada's investments in space benefit the Canadian economy

**Link to the department's Program Inventory:**

- Space Capacity Development
- Space Utilization
- Space Exploration
- Internal Services

**Purpose and objectives of transfer payment program:**

The Class Grant and Contribution (G&C) Program supports knowledge development and innovation in the CSA's priority areas while increasing the awareness and participation of Canadians in space-related disciplines and activities. The program has two components:

- a. Research
- b. Awareness and Learning.

The Research Component aims to support the development of science and technology, foster the continual development of a critical mass of researchers and highly qualified personnel (HQP) in

Canada and support information gathering and space-related studies and research pertaining to the CSA priorities.

The Awareness and Learning Component aims to provide learning opportunities to Canadian students in various space-related disciplines to support the operations of organizations dedicated to space research and education and to increase awareness of Canadian space science and technology (S&T) among Canadian students and their participation in related activities.

This transfer payment program is composed of grants and non-repayable contributions.

**Results achieved:**

Note: In line with the G&C Evaluation recommendations and the new performance measurement strategy, the indicators for this program have been updated. Therefore, the results presented for 2022–23 below are based on the updated indicators.

**Research component**

- Result #1: Sciences, Research and Development (R&D) opportunities.
  - 377 scientific investigations, R&D or demonstration projects have been funded by the Class G&C program.
- Result #2: Space R&D advances science, technologies, applications and expertise.
  - 98 technologies and applications funded by the Class G&C Program advanced their Technology Readiness Level (TRL) or Application Readiness Level (ARL).
  - 1,757 students were involved in projects supported by the Class G&C program.
  - 2,590 HQP were involved in projects funded by the Class G&C program.
- Result #3: Canadian space sector is developed and well positioned.
  - 439 Canadian organizations were involved in projects funded by the Class G&C program.
- Result #4: Knowledge of space is advanced through science.
  - 145 scientific peer-reviewed publications acknowledging the CSA funding.

**Awareness and Learning component**

- Result #5: Learning opportunities and outreach activities.
  - 497 opportunities offered to youth (K-12) through the Class G&C program funding.
- Result #6: Young Canadians engage with space.
  - 18,597 youth were reached through space-STEM activities funded by the Class G&C program.

**Findings of audits completed in 2022–23:** No audit was completed in 2022–23 on this program and no audit is currently planned.

**Findings of evaluations completed in 2022–23:** The last evaluation of the Class G&C program was completed in the 2021–22 fiscal year. A management action plan is in place and officials within the Agency are working on implementing the recommendations according to the timelines established.

**Engagement of applicants and recipients in 2022–23:**

The CSA frequently publishes Announcements of Opportunity (AOs) through its Class Grant and Contribution Program to support research, awareness and learning in space science and technology. These AOs are presented on the CSA’s grants and contributions website and are updated regularly. Since January 2012, an initiative to engage recipients has been undertaken through a survey. This year, the CSA has published the survey on its web page in order to establish a dialogue with potential applicants and recipients.

### Financial information (dollars)

Type of transfer payment	2020–21 Actual spending	2021–22 Actual spending	2022–23 Planned spending	2022–23 Total authorities available for use	2022–23 Actual spending (authorities used)	Variance (2022–23 actual minus 2022–23 planned)
<b>Total grants</b>	9,638,684	10,961,530	14,975,000	14,058,691	14,058,689	-916,311
<b>Total contributions</b>	19,790,299	25,720,020	32,933,950	23,566,658	23,566,658	-9,367,292
<b>Total program</b>	29,428,983	36,681,550	47,908,950	37,625,349	37,625,347	-10,283,603

### Explanation of variances

The variance is mainly due to delays in the implementation of agreements and the execution of contributions from the Space Technology Development Program (STDP).



## **Gender-based analysis plus**

### **Section 1: Institutional GBA Plus governance and capacity**

#### **Governance**

The CSA's Responsibility Centre oversees the promotion and implementation of GBA Plus to ensure a fairness and inclusion lens is well integrated into the Agency's decision-making processes and activities. It includes:

- The GBA Plus Champion, leading the promotion of GBA Plus.
- The GBA Plus Focal Point, supporting the implementation of GBA Plus and providing a challenge function on Budget Proposals, Memoranda to Cabinet, Treasury Board Submission, Grants and Contributions, and projects and contracts.
- 19 GBA Plus Points of Contact, representing 13 distinct functional areas that provide guidance and support on GBA Plus assessments, in collaboration with the GBA Plus Focal Point.
- The Economic Research and Analysis Team, maintaining the CSA's GBA Plus Data Inventory and exploring and retrieving potential disaggregated data through ongoing collaborations with Statistics Canada, while balancing response burden and data validity.
- The Governance and Results Team, assisting programmatic sectors in ensuring a GBA Plus lens is applied to initiative outcomes, indicators, and targets and ensuring the availability, quality, utility and use of GBA Plus data, in alignment with the Treasury Board Policy on Results.

#### **Capacity**

In 2022–23, the CSA began working on an update of its GBA Plus Policy and implementation tools to ensure they align with the latest guidance and tools from Women and Gender Equality Canada. The CSA also began drafting a three-year GBA Plus Action Plan in collaboration with sectors and Equity, Diversity, and Inclusion Networks at the CSA. Their contributions will help to ensure accountability in implementing the policy at all levels.

In 2022–23, the CSA collected data on gender as well as on geographic and occupational factors through the Performance Indicators and State of the Canadian Space Sector Surveys to strengthen its capacity to report on gender and diversity outcomes. In winter 2023, the CSA's GBA Plus data was made available to all CSA employees.

The CSA attended Women and Gender Equality Canada's (WAGE) GBA Plus Champions Network and Interdepartmental Focal Point Committee Meetings. The CSA's GBA Plus Community of

Practice also exchanged concrete tips and examples on how the space sector can better serve systemically disadvantaged groups of people in Canada.

The Program Information Profiles (PIP) were also updated in 2022–2023 to ensure the availability, monitoring and reporting of relevant GBA Plus data on selected program indicators, thereby informing the decision-making process with better-developed analysis.

In March 2023, CSA employees from across the Agency participated in a conference in which the recommendations that came out of the [CSA's Evaluation of GBA Plus implementation](#), the first evaluation of GBA Plus in the Government of Canada, were presented. Practical applications and examples for applying GBA Plus within the CSA's context were also shared with the participants.

In 2022–23, the CSA established an Indigenous Community of Practice (iCoP) with representation from all its sectors. The objective of iCoP is to increase Indigenous participation in the Canadian Space Program, as well as to lay the groundwork for co-development of an Indigenous inclusion strategy in the following areas: strengthening internal capacity, expanding engagement, and identifying, promoting, and delivering space and technology benefits to Indigenous Peoples. Two sessions on reconciliation were delivered by an Indigenous expert consultant for CSA Executives and iCoP. In addition, iCoP received additional training on “Inuit in Canada” delivered by Agriculture and Agri-Food Canada. The CSA also analyzed barriers to Indigenous inclusion in CSA funding programs, working with the Grants and Contributions Centre of Expertise to implement government-wide best practices.

In 2022–23, the CSA developed a three-year recruitment strategy to ensure active measures are implemented to close gaps in representation for women, Indigenous Peoples, racialized populations/visible minorities, and persons with disabilities across all sectors, levels, and classifications at the Agency. This strategy was co-developed with the Women in STEM (Science, Technology, Engineering, and Mathematics) Management Committee, iCoP, the Visible Minority Network, and the Accessibility Network.

The CSA Speakers Bureau also carried out numerous events to promote women and girls in the sector. In 2022–23, 62.63% of conferences offered by the Bureau included CSA women experts. Additionally, 10 conferences (virtual and in person) were offered about Women in STEM or specifically aimed at girls. The CSA Speakers Bureau also continues to support CSA women

engineers in participating as judges and mentors every year in various robotics competitions across Canada (e.g. FIRST Robotics).

## Section 2: Gender and diversity impacts, by program

**Core responsibility:** Canada in Space

**Program name:** Space Capacity Development Program (SCDP)

**Program goals:**

The SCDP carries out activities that range from pre-mission research and development (R&D) to timely flight demonstration, with the aim of positioning the Canadian space sector for global opportunities. It offers an end-to-end approach—from idea to space—with activities that are targeted to increase space and market readiness for both science and technologies to be flight-ready for space missions, whether they are commercial, or government driven. It also develops the space workforce of tomorrow by encouraging youth from kindergarten to grade 12 (secondary 5 in Quebec) to pursue careers in STEM, and by supporting hands-on experience for post-secondary students and early-career professionals, particularly among women, Indigenous Peoples, racialized populations, and persons with disabilities.

**Target population:** Space industry, post-secondary institutions, youth, students

### Distribution of benefits

Distribution	Group
By gender	Second group: 60% to 79% men
By income level	Fifth group: strongly benefits high-income individuals
By age group	Second group: no significant intergenerational impacts or impacts on generations between youths and seniors

### Specific demographic group outcomes

Available data indicates that SCDP R&D funding recipients are 76% men, 23.6% women, and 0.4% non-binary and gender-diverse people. This indicates that men primarily benefit from SCDP R&D funding, whereas women and non-binary and gender-diverse people may face barriers to accessing opportunities through the program. For example, while disaggregated data gaps persist, studies, research, and anecdotal evidence demonstrate that men, White people, and able-bodied individuals have preferential access to STEM education and STEM fields. Women, Indigenous Peoples, racialized populations, particularly Black people, and persons with disabilities are underrepresented in STEM educations and careers due to compounded systemic barriers to entry and retention. SCDP aims to reduce barriers to entry and retention by providing equitable

opportunities for systemically disadvantaged groups to pursue STEM education and careers in the space sector and STEM fields.

In addition, SCDP R&D funding recipients represent all provinces and territories in Canada. Most funding recipients resided in Quebec and Ontario (60%), with lower rates in the Western (14.7%) and Eastern (14.2%) provinces, the Northwest Territories (0.05%), Yukon (0.1%), and Nunavut (0.2%).

### **Key program impacts\* on gender and diversity**

#### *Inspiring youth to pursue careers in STEM*

The CSA’s “Youth Learning” initiative encourages the participation of systemically disadvantaged groups, including girls, youth from Indigenous communities, youth from socio-economically disadvantaged communities, and racialized populations, in space-related content to inspire them to pursue studies in STEM fields. This initiative is a critical component of the CSA’s goal to inspire all youth in Canada from kindergarten to grade 12 (secondary 5 in Quebec). In 2022–23, gender balance was achieved at a participation rate of 52.1% girls and 47.9% boys.

Through the CSA’s learning and awareness grants, the CSA supported two educational (grades 6–9) initiatives on rovers and lunar science to help youth develop coding and scientific abilities, and the leadership and teamwork skills required when working on a mission. These initiatives were tailored to equitably reach six systemically disadvantaged groups of youth in STEM, including girls, Indigenous youth, socio-economically vulnerable youth, racialized populations with a specific focus on Black youth, youth living with disabilities or exceptionalities, and youth from northern and remote communities.

In addition, funding was also provided to five organizations that reach Indigenous youth. These inclusive activities reached more than 275 Indigenous students directly and over 7,000 through online materials, online workshops, in-community sessions and several offerings of a two-week camp experience.

#### *Creating high-profile opportunities for all students in the space sector*

The Science, Technology and Expertise Development in Academia (STEDiA) initiative supports Canadian post-secondary institutions that offer hands-on experience in space-like missions to post-secondary students and early career professionals. This initiative also provides direct support to post-secondary students for career and professional development opportunities, including space conferences and training. All activities include measures to promote access and participation among students and early-career professionals from all over the country, including women, Indigenous peoples, persons with disabilities, and visible minorities. In 2022–23, STEDiA reached 73.1% men and 26.3% women, which is higher than the overall SCDP average (23.6%).

**Key program impact statistics**

<b>Statistic</b>	<b>Observed results*</b>	<b>Data source</b>	<b>Comment</b>
SCDP R&D funding recipients by gender	Women: 23.6% Men: 76.0% Gender-fluid, non-binary and/or Two-Spirit: 0.4%	Performance Indicators Survey	
SCDP R&D funding recipients who are students	Students: 40.0% Non-students: 60.0%	Performance Indicators Survey	
SDCP R&D funding recipients, by Province or Territory	B.C.: 9.7% Alta: 7.1% Sask: 4.1% Man: 3.5% Ont: 34% Que: 26% N.B.: 6.5% N.S.: 1.6% N.L.: 5.7% P.E.I.: 0.4% YT: 0.1% NT: 0.05% NU: 0.2%  Note: Total may not add up due to rounding	Performance Indicators Survey	

\*2022–23

**Other key program impacts**

Under STEDIA, the CUBICS initiative provides post-secondary institutions across Canada with an opportunity to engage students in a real space mission by supporting projects that consist of developing a standalone scientific payload or an end-to-end CubeSat. A CubeSat is a square-shaped miniature satellite (roughly the size of a Rubik’s cube) that can be used to test instruments, conduct science experiments, enable commercial applications and support educational projects. This unique hands-on experience aims to increase students’ interest in STEM fields, help them to acquire

expertise in a wide variety of areas, and impart invaluable skills needed to transition into Canada’s space workforce. This initiative also promotes diversity and inclusion through measures that encourage the participation of students and systemically disadvantaged groups from all over the country, particularly women and Indigenous Peoples.

At Queen’s University, the CSA supported Q-AISES, the only Indigenous rocketry team in Canada to compete in NASA’s First Nations Launch (FNL) competition. Q-AISES originated from AISES, the American Indian Science and Engineering Society. This initiative is designed to increase the knowledge and skills of post-secondary students, with a particular focus on Indigenous students, in space-related disciplines. The students received quality workshops throughout the competition, led by Indigenous professionals at NASA, through which they acquired knowledge and skills required to design, build, and fly a high-powered rocket and compete against other Indigenous teams from across the United States.

**Core responsibility:** Canada in Space

**Program name:** Space Exploration Program (SEP)

**Program goals:**

The SEP provides innovative technologies and qualified Canadian astronauts for important space missions, including the return to the Moon. The program enables scientific discoveries that help address important challenges facing remote and northern communities on Earth, including equitable health care and food production and security. It also provides unique opportunities for academia and industry, particularly women and students, to participate in international space exploration initiatives.

**Target population:** Space industry, academia, food production and health care sectors, students, remote and northern populations

**Distribution of benefits**

Distribution	Group
<b>By gender</b>	Second group: 60% to 79% men
<b>By income level</b>	Fifth group: strongly benefits high-income individuals
<b>By age group</b>	Second group: no significant intergenerational impacts or impacts on generations between youths and seniors

**Specific demographic group outcomes:**

### *Employment*

Available data indicates that SEP R&D funding recipients are 71.6% men, 28% women, and 0.4% non-binary and gender-diverse people. This indicates that men primarily benefit from SEP R&D funding, whereas women and non-binary and gender-diverse people may face barriers to accessing opportunities through SEP.

In addition, many SEP R&D funding recipients reside in Ontario (68%), with lower rates in Quebec (18%), the Western (10.8%) and Eastern (8.8%) provinces, and Nunavut (0.3%). There were no funding recipients in N.L, P.E.I, the Northwest Territories, or the Yukon.

### *Environment and Health*

Deep space is a harsh and isolated environment, and astronauts face some of the same challenges related to access to health care and quality food that people living in remote and northern communities face, including Indigenous Peoples. The SEP recognizes the potential for diverse groups living in remote and northern regions in Canada, including Indigenous Peoples, to directly and indirectly benefit from innovative technology and solutions made possible through investments in deep space food and health care initiatives, and invests in advancing those benefits.

### **Key program impacts\* on gender and diversity:**

#### *Enabling equitable health care technologies and systems in northern and remote regions through deep space investments*

The Deep Space Healthcare Challenge seeks to develop new, innovative, and sustainable diagnostic and detection technologies to support crews on long-duration space missions. The same technologies will also support healthcare practitioners in remote communities in Canada. At Stage 2 of the Challenge, Community Advisors (CA) were matched with the semi-finalists to provide them support in developing remote healthcare technologies that are responsive to the needs of individuals living in remote or isolated communities in Canada. The group of CAs included representation from the First Nations Health Authority, Indigenous Services Canada, and remote health care providers.

#### *Addressing food security challenges in northern and remote regions through deep space food investments*

The Deep Space Food Challenge seeks to create novel food production technologies or systems that require minimal inputs and maximize safe, nutritious, and palatable food outputs for long-duration space missions, with potential to benefit people on Earth especially remote and northern communities.

To affirm the unique rights and interests of Inuit, the CSA contracted Arctic Fresh Inc., an Inuit-owned social enterprise, to train local technicians for the Naurvik Project (“the growing place” in Inuktitut), a renewable energy plant production facility in Gjoa Haven, Nunavut. These efforts will enable culturally responsive understanding of food production and food security challenges in Canada’s North, and in harsh and isolated locations, such as space.

*Inspiring all youth to pursue STEM education through lunar investments.*

Through its contributions to Canadarm3 for the lunar gateway, the CSA is supporting educators through the Objective: Moon learning materials to capture the hearts and minds of a diversity of youth, encouraging them to pursue studies in STEM fields.

**Key program impacts statistics:**

Statistics	Observed results*	Data source	Comment
SEP R&D funding recipients by gender	Women: 28.0% Men: 71.6% Gender-fluid, non-binary and/or Two-Spirit: 0.4%	Performance Indicators Survey	
SEP R&D funding recipients who are students	Students: 17.7% Non-students: 82.3%	Performance Indicators Survey	
SEP R&D funding recipients, by Province or Territory	B.C.: 5.7% Alta: 3% Sask: 1.2% Man: 0.9% Ont. 68% Que. 18% N.B. 0.6% N.S. 2.5% N.L. 5.7% NU. 0.3%  Note: Total may not add up due to rounding	Performance Indicators Survey	

\* 2022–23



**Other key program impacts:**

Not available

**Core responsibility:** Canada in Space

**Program name:** Space Utilization Program (SUP)

**Program goals:**

The SUP leverages earth observation and other near-earth activities to ensure that Canada takes full advantage of the potential offered by space for the benefit of all Canadians. SUP supports the collection of, and access to space data and space-enabled information and services by the Canadian public sector, industry, academia, and Indigenous Peoples. The data and information are used to inform policy and decision making, connect partners within the space community in Canada, and better understand Earth. SUP also provides the scientific community with the necessary input required to perform research in areas related to the Sun-Earth system.

**Target population:** Canadian public sector, space industry, academia, and Indigenous Peoples

**Distribution of benefits**

Distribution	Group
By gender	Second group: 60% to 79% men
By income level	Fifth group: strongly benefits high-income individuals
By age group	Second group: no significant intergenerational impacts or impacts on generations between youths and seniors

**Specific demographic group outcomes:**

Available data indicates that SUP R&D funding recipients are 71.2% men, 28.3% women, and 0.5% non-binary and gender-diverse people. This indicates that men primarily benefit from SUP R&D funding, whereas women and non-binary and gender-diverse people may face barriers to accessing opportunities through SUP.

In addition, many SUP R&D funding recipients reside in Ontario (32%), Alberta (19.3%), and Quebec (16%), with lower rates in the other Western provinces (16.7%) and Eastern (8.8%)

provinces, and Nunavut (0.3%). There were no funding recipients in Manitoba, the Northwest Territories, or the Yukon.

**Key program impacts\* on gender and diversity:**

The CSA provided funding to the Arctic Eider Society to develop an enhanced version of the SIKU Ice Map to identify persistent hazards in the landfast ice and set the groundwork for the first-ever Indigenous-trained machine learning algorithm that delivers EO derived products at scale for the benefit of northern shipping, sea ice travel safety and climate change research.

In November 2022, as part of the Indigenous Mapping Workshop (IWG) 2022 sessions, NASA and the CSA delivered an introductory session on satellite EO (Earth Observation) with optical and radar imagery and organized two dialogue sessions with industry, academia colleagues, and Indigenous project partners. In a yarnning session titled, “Collective Turtle Island Storytelling and EO” participants shared their EO stories.

The CSA is also co-organizing a workshop on “Storying the Relationship Between Indigenous Wisdom and Earth Observation” as part of the Canadian National Earth Observation Forum at the CSA in October 2023, as well as unique Indigenous contributions, among others, for the CSA’s Satellite Art initiative.

Indigenous participation plans were also established in the contract for WildFireSat as part of the CSA’s Indigenous Procurement Business Strategy to increase equitable access to opportunity and reduce barriers to entry in the space sector among Indigenous-owned businesses and entrepreneurs.

**Key program impacts statistics:**

Statistics	Observed Results*	Data Source	Comment
SUP R&D funding recipients by gender	Women: 28.3% Men: 71.2% Gender-fluid, non-binary and/or Two-Spirit: 0.5%	Performance Indicators Survey	
SUP R&D funding recipients who are students	Students: 21.4% Non-students: 78.6%	Performance Indicators Survey	
SUP R&D funding recipients, by	B.C.: 3.7% Alta: 19.3% Sask: 13%	Performance Indicators Survey	

Province or Territory	Ont: 32% Que: 16% N.B.: 8.5% N.S.: 6% N.L.: 1.4% P.E.I.: 0.4% Note: Total may not add up due to rounding		
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\* 2022–23

**Other key program impacts:**

Not available

**GBA Plus data collection plan**

In 2022–2023, the CSA continued to implement the action plan of the evaluation of the implementation of Gender-Based Analysis Plus at the Canadian Space Agency. In particular, the CSA collaborated with Statistics Canada to obtain more aggregated and disaggregated data on those employed by the space sector. This new information was analyzed and compiled with the disaggregated data already collected through various internal data collections. A GBA Plus data cheat sheet was created and made available to all CSA employees to centralize the information and increase its visibility.

The Program Information Profiles (PIP) were updated in 2022–23 to ensure the availability, monitoring and reporting of relevant GBA Plus data on selected program indicators, thereby informing the decision-making process with better developed analysis.

**Scales**

**Gender scale**

- First group: predominantly men (80% or more men)
- Second group: 60% to 79% men
- Third group: broadly gender-balanced
- Fourth group: 60% to 79% women
- Fifth group: predominantly women (80% or more women)

**Income-level scale**

- First group: strongly benefits low-income individuals (strongly progressive)
- Second group: somewhat benefits low-income individuals (somewhat progressive)
- Third group: no significant distributional impacts

- Fourth group: somewhat benefits high-income individuals (somewhat regressive)
- Fifth group: strongly benefits high-income individuals (strongly regressive)

**Age-group scale**

- First group: primarily benefits youth, children or future generations
- Second group: no significant intergenerational impacts or impacts on generations between youths and seniors
- Third group: primarily benefits seniors or the baby boomer generation

## **Response to parliamentary committees and external audits**

### **Response to parliamentary committees**

There were no parliamentary committee reports in 2022–23 requiring a response.

### **Response to audits conducted by the Office of the Auditor General of Canada (including audits conducted by the Commissioner of the Environment and Sustainable Development)**

There were no audits in 2022–23 requiring a response.

### **Response to audits conducted by the Public Service Commission of Canada or the Office of the Commissioner of Official Languages**

There were no audits in 2022–23 requiring a response.