




DEPARTMENTAL SUSTAINABLE DEVELOPMENT STRATEGY

2023-2027



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Executive Summary

Through its first Departmental Sustainable Development Strategy (DSDS), the Canadian Space Agency (CSA) is highlighting its efforts to foster the use of space technologies, data, and solutions in reaching Canada's and the world's sustainable development ambitions.

Over the past decades, the CSA has invested in technologies, missions, science, and application development aligned with the United Nations Sustainable Development Goals (SDGs). As part of its contributions to the Federal Sustainable Development Strategy (FSDS), the CSA is committed to providing space-based services and technologies to monitor and protect our ecosystems. Earth observation (EO) provides trustworthy data critical for supporting the development and implementation of effective sustainable policy, programs and initiatives aimed at mitigating the effects of climate change.

The CSA plays a vital role in helping the Government achieve its environmental, social, and economic sustainability goals. Through collaboration with partners and stakeholders across the space sector, and industries that relate to space activities, the CSA is helping to advance technological innovation in food production and health domains, inspire people of all ages and backgrounds and pursue careers in the space domain, improve access to and provision of key environmental data while implementing equitable and sustainable internal processes.

Leveraging Canada's position as a space-faring nation, the CSA will continue to improve the quality of life of Canadians while contributing to Canada's equitable and sustainable prosperity. The departmental actions mentioned in this DSDS act as a baseline for the CSA's commitment toward achieving the FSDS and 2030 Agenda goals.

To that end, the CSA is pleased to present its 2023–2027 DSDS.

SECTION 1

Introduction to the Departmental Sustainable Development Strategy

The 2022 to 2026 Federal Sustainable Development Strategy (FSDS)

presents the Government of Canada's sustainable development goals and targets, as required by the *Federal Sustainable Development Act*. This is the first FSDS to be framed using the 17 Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda; it provides a balanced view of the environmental, social and economic dimensions of sustainable development.

In keeping with the purpose of the Act, to make decision-making related to sustainable development more transparent and accountable to Parliament, the Canadian Space Agency (CSA) is supporting the goals laid out in the FSDS through the activities described in this Departmental Sustainable Development Strategy (DSDS).

The *Federal Sustainable Development Act* also sets out **7 principles** that must be considered in the development of the FSDS as well as DSDSs. These basic principles have been considered and incorporated in the CSA's DSDS.

In order to promote coordinated action on sustainable development across the Government of Canada, this departmental strategy integrates efforts to advance Canada's implementation of the 2030 Agenda National Strategy, supported by the Global Indicator Framework (GIF) and Canadian Indicator Framework (CIF) targets and indicators. The strategy also now captures SDG initiatives that fall outside the scope of the FSDS to inform the development of Canada's Annual Report on the 2030 Agenda and the SDGs.



SECTION 2

The Canadian Space Agency's Sustainable Development Vision

In line with its mandate of “promoting the peaceful use and development of space, advancing the knowledge of space through science, and ensuring that space science and technologies provide social and economic benefits for Canadians,” the Canadian Space Agency (CSA) is committed to ensuring that its activities are carried out in a sustainable manner, both in space and on land. To this end, the CSA has developed a vision:

CANADIAN SPACE AGENCY SUSTAINABLE DEVELOPMENT VISION

To explore and utilize space to improve the life of Canadians, while fostering sustainable practices and ensuring preservation of our planet and its space environment for future generations.

This vision is the guiding principle behind the CSA's first Departmental Sustainable Development Strategy (DSDS), which details the CSA's key actions contributing to achieving the 2022 to 2026 Federal Sustainable Development Strategy (FSDS) and the 2030 Agenda goals.

The CSA supports the following goals:

GOAL 2: SUPPORT A HEALTHIER AND MORE SUSTAINABLE FOOD SYSTEM AND GOAL 3: SUPPORT MENTAL HEALTH AND ADOPT HEALTHY BEHAVIOURS

There are parallels in the challenges faced by astronauts in space and people living in Canada's remote and Northern communities, more specifically food security and healthcare. The CSA is committed to addressing these challenges by leveraging space health and food innovations to promote sustainable agricultural practices and improve healthcare provision in remote and Northern communities.

GOAL 4: PROMOTE KNOWLEDGE AND SKILLS FOR SUSTAINABLE DEVELOPMENT

Space provides an unprecedented opportunity to inspire, captivate, and instill a sense of wonder among Canadians of all ages. Through targeted initiatives in science, technology, engineering and mathematics (STEM) learning, the CSA seeks to inspire youth to pursue STEM careers and, to promote the acquisition of skills and knowledge for sustainable development.

GOAL 5: CHAMPION GENDER EQUALITY

The CSA is taking action on gender equality through its rigorous application of Gender-based Analysis Plus (GBA Plus) to all its initiatives. Additionally, the CSA is co-hosting with the United Nations Office for Outer Space Affairs (UNOOSA) the Space4Women 2023 Expert Meeting in Montreal. Experts from space agencies, academia, industry, and international organizations will share experiences, best practices, and lessons learned in advancing gender equality in the space sector.

GOAL 8: ENCOURAGE INCLUSIVE AND SUSTAINABLE ECONOMIC GROWTH IN CANADA

Prosperity of Canadians is at the core of the CSA mandate. By driving technological innovation and research, the CSA contributes to the growth of the space sector and the development of a highly qualified workforce while leveraging space technologies to address environmental challenges.

GOAL 10: ADVANCE RECONCILIATION WITH INDIGENOUS PEOPLES AND TAKE ACTION ON INEQUALITY

Advancing reconciliation with Indigenous peoples has been a long-standing goal at the CSA. The CSA will continue working towards engaging First Nations, Inuit, and Métis communities in space initiatives, with the overall goal of establishing long-term relationships with these communities. The CSA will continue to adopt inclusive hiring processes into its recruitment strategies, so that the CSA's workforce matches labour market availability for all employment equity groups.

GOAL 12: REDUCE WASTE AND TRANSITION TO ZERO-EMISSION VEHICLES

As with other government departments, the CSA is actively working towards reducing waste and promoting the use of zero-emission vehicles. Through its commitment to green procurement, the CSA has undergone a carbon footprint study to analyze its purchases of goods and services and get a better understanding of the environmental impacts of its procurement activities.

GOAL 13: TAKE ACTION ON CLIMATE CHANGE AND ITS IMPACTS

From implementing the Greening Government Policy into its internal processes to collaborating with our international partners on emergency management and disaster risk reduction, the CSA will work towards becoming a carbon-neutral space agency while ensuring that sustainable development is firmly anchored in its organizational culture. The CSA is also playing a leading role within the Government of Canada to ensure the accessibility and use of Earth observation data, which enable climate resilience services and promote sustainable growth.

GOAL 17: STRENGTHEN PARTNERSHIPS TO PROMOTE GLOBAL ACTION ON SUSTAINABLE DEVELOPMENT

With its population scattered across almost 10 million square kilometres, Canada has a unique challenge in collecting the environmental intelligence it needs. This reality spurred Canada's interest to use satellite Earth observations (EOs). As part of its contributions to the FSDS, the CSA provides space-based services and technologies to monitor and protect our ecosystems. Through the provision of EO data, the CSA will contribute to bringing its partners together to advance knowledge of the Earth, enhance the growth of the space sector and provide reliable services to Canadians. Those partnerships will result in innovative space-based solutions whose benefits will be spread across the 17 SDGs.

GOING FORWARD

Leveraging the unique opportunities that space offers, the CSA will continue working towards creating a sustainable future, where scientific advancement and technological innovation benefit Canadians and the environment. Detailed actions and activities are presented in section 4 of the DSDS.

SECTION 3

Listening to Canadians

As required by the Federal Sustainable Development Act, the CSA has reviewed and taken feedback into account from the 2022–2026 FSDS public consultations held between March 11th and July 9, 2022. During those consultations, the CSA delivered Satellite Earth Observations for Sustainable Development public webinar to discuss the multiple possibilities of EO and its application towards reaching the SDGs.

During public consultations, more than 700 comments were received from a broad range of stakeholders, including governments, Indigenous organizations, non-governmental organizations, academics, businesses, and individual Canadians of various backgrounds. The draft FSDS was also shared with the appropriate committees of the House of Parliament, the Commissioner of the Environment and Sustainable Development, and the Sustainable Development Advisory Council for their review and comment.

WHAT WE HEARD

Across the submissions received, the CSA found no specific comments concerning the space domain and sustainable development. However, we identified sustainable development priorities and issues that affect our department. In particular, the FSDS public consultation highlighted the public's view that targets should be feasible, and that follow-ups should be done regularly to ensure accountability.

WHAT WE DID

The CSA took the above-mentioned priorities and issues into consideration when creating this DSDS.

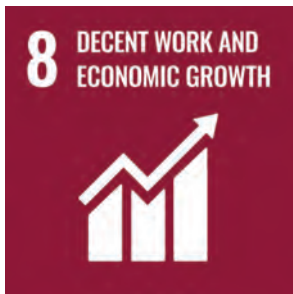
To ensure a rigorous and objective approach to setting targets, implementation, and results, the CSA made sure that all DSDS indicators were rigorously integrated into our Departmental Results Framework and Performance Information Profiles.

For more information on the FSDS public consultation and its results, see the [FSDS Consultation Report](#).



SECTION 4

The Canadian Space Agency's Commitments





GOAL 2 SOUTENIR UN SYSTÈME ALIMENTAIRE PLUS SAIN ET PLUS DURABLE

FSDS CONTEXT

Access to healthy food and a sustainable food supply is unfortunately not a reality for all Canadians. Some Canadian communities are remote and often face harsh environments, making access to fresh foods particularly difficult. Since these conditions are sometimes comparable to those faced by astronauts, the CSA has explored ways to use space technologies to **improve access to fresh food across the country**. For instance, the CSA is participating in the **Naurvik initiative** which translates to “place to grow” in Inuktitut. This project involved the creation of a hydroponic food production system in a small Nunavut community 250 km north of the Arctic Circle, now operated by the resident Indigenous technicians that have been trained in hydroponics, controlled environment food production and air conditioning systems, with the project aiming to produce a variety of fresh, nutritious foods in harsh environments.

Between 2023 and 2027, the CSA will continue to support initiatives aimed at developing new food production technologies via design studies, and other activities such as the **Deep Space Food Challenge**. In collaboration with NASA, this competition seeks to create new food production technologies that require minimum input to produce the maximum amount of healthy food. Innovations coming from this competition will result in improvements in technologies, both in space and on Earth. Ultimately, this project and other **CSA food production activities** seek to build knowledge and capacity for a more sustainable agriculture.



IMPLEMENTATION STRATEGIES SUPPORTING THE GOAL

This section is for implementation strategies that support the goal “Support a healthier and more sustainable food system”, but not a specific FSDS target.

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Help Canadian communities access healthy food.</p>	<p>Continue working with NASA on the Deep Space Food Challenge to develop sustainable, low-input food production systems here on Earth, particularly in remote environments such as Canada's North.</p> <p>Program: Space Exploration</p>	<p>Performance indicator: Number of Canadian space technologies adapted for use on Earth in the agri-food sector.</p> <p>Starting point: 0</p> <p>Target: 2 space technologies adapted for use on Earth in the agri-food sector by 2026-27.</p>	<p>The Deep Space Food Challenge will encourage the modernization of food production systems to help make healthy food more accessible in remote and harsh environments. The technologies and systems that are created in this challenge can be implemented in remote Canadian communities, increasing access to nutritious foods. Moreover, since these systems will produce foods on-site, it can increase food options in those areas. By continuing to work with NASA in this Challenge, the CSA is supporting the development of a healthier and more sustainable food system.</p>



Relevant targets or ambitions:
CIF Ambition 2.1: Canadians have access to sufficient, affordable, and nutritious food.

CIF Indicator 2.1.1:
 Prevalence of food insecurity.

GIF Target 2.1: By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious, and sufficient food all year-round.

GIF Indicator 2.1.2: Prevalence of moderate or severe food insecurity in the population based on the Food Insecurity Experience Scale (FIES).



GOAL 3 SUPPORT MENTAL HEALTH AND ADOPT HEALTHY BEHAVIOURS

FSDS CONTEXT

The CSA has many initiatives aimed at improving the Canadians health and well-being. The unique, isolated, and extreme environment of space provides research opportunities to find innovative solutions to healthcare challenges shared by astronauts and people living in remote communities. For example, under the **Health Beyond** initiative, the CSA has tasked five Canadian companies with the creation of a Connected Care Medical Module (C²M²). A C²M² consists of state-of-the-art medical technologies incorporated into a mobile structure that will both equip astronauts to manage their health throughout long-duration missions and significantly improve the quality of remote healthcare.

The first prototypes of C²M² will be completed in 2023–24, paving the way for deployment and testing in remote areas in the coming years.

Furthermore, the CSA, through the **Deep Space Healthcare Challenge**, has called on innovators across Canada to create autonomous tools needed by astronauts and healthcare workers in remote communities to detect and diagnose medical conditions quickly and efficiently.

The CSA will also support health studies and health-related technology developments that will lead to terrestrial benefits. Experiments at the **International Space Station (ISS)**, for example, lead to the development of knowledge and technologies that can improve health outcomes for Canadians and improve our understanding of various diseases. The **TBone2**, **SANSORI**, **Wayfinding**, and **CARDIOBREATH** studies will continue to generate knowledge that could help doctors in predicting who is at higher risk of bone fractures, determining the impacts of cranial blood pressure on eyesight, providing relief to individuals with balance disorders, and better understanding cardiovascular disease. The **MicroPREP project** is a portable “lab-on-a-chip” technology, usable in both clinical and remote settings, that has the ability to isolate multiple macromolecules such as DNA, proteins or rare cells, making it possible to assess immune system state, inflammation, bone loss or radiation effects.



IMPLEMENTATION STRATEGIES SUPPORTING THE GOAL

This section is for implementation strategies that support the goal “Support mental health and adopt healthy behaviours” but not a specific FSDS target.

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Collect data and information to inform evidence-based decisions.</p>	<p>The Space Exploration program will continue the implementation of its wide range of health studies and health-related technology development through its participation in the International Space Station (ISS) and the Gateway outpost. It will also continue the Health Beyond initiative and finalize the Deep Space Healthcare challenge.</p> <p>Program: Space Exploration</p>	<p>Performance indicator: Number of Canadian space technologies adapted for use on Earth in the health field.</p> <p>Starting point: 0</p> <p>Target: 2 space technologies adapted for use on Earth in the health field by 2026-27</p> <p>Performance indicator: Number of scientific peer-reviewed publications acknowledging Space Exploration Program (SEP) funding in the subfield of space health and life science.</p> <p>Starting point: 2 peer-reviewed publications acknowledging SEP funding in the subfield of space health and life science in 2022.</p> <p>Target: 30 peer-reviewed publications acknowledging SEP funding in the subfield of space health and life science between 2023 and 2027.</p>	<p>Canada's participation in the ISS and Gateway outpost provides a unique occasion to foster innovation, collect data and information to increase knowledge in the medical domain. Studying the effects of weightlessness in space provides insights into the impacts of reduced physical activity on Earth. It mimics accelerated aging and health problem caused by a sedentary lifestyle. Canadian scientists focus on studying bones, heart, blood vessels and the brain to address balance issues, osteoporosis, cardiovascular disorders, and diabetes. As space missions become longer and more distant, crew autonomy in managing health becomes crucial. This need for autonomy also applies to remote and populations isolated from full medical care services. Improving telemedicine technologies and tools for autonomous medical care in remote communities will contribute to increasing health supports coverage in Canada.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 3.8:</i> Canada prevents causes of premature death.</p> <p><i>GIF Indicator 3.4.1:</i> Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease.</p> <p><i>GIF Target 3.8:</i> Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.</p> <p><i>GIF Indicator 3.8.1:</i> Coverage of essential health services.</p>



GOAL 4 **PROMOTE KNOWLEDGE AND SKILLS** **FOR SUSTAINABLE DEVELOPMENT**

FSDS CONTEXT

The CSA has taken various approaches to promote knowledge and skills for sustainable development. Space spurs the development of new technologies, industries, and peaceful connections with other nations. It also inspires youth to pursue studies and careers in science, technology, engineering, and mathematics (STEM) sectors. The CSA will leverage the opportunities brought forth by significant Canadian involvement in space, such as the contributions of Canadarm3 to the Lunar Gateway and the first flight by a Canadian astronaut around the Moon, to encourage youth to pursue education in STEM fields. The creation of **Objective: Moon's** curriculum-linked online resources, activities, and speaker events support educators in promoting space and STEM education among Canadian youth. With other toolkits, printables, digital games, activities, and experiments available online, the CSA has created a plethora of resources that teachers can use to inspire students.

As a founding member of the **International Space Education Board** (ISEB), the CSA is committed to work with other space agencies to increase STEM literacy and support the future workforces of space programs.

The **Space Strategy** describes Canada's efforts that seek to create a diverse and highly skilled workforce, promoting digital skills and literacy, and attracting, training, and retaining talent. As part of these efforts, the CSA provides grants to post-secondary institutions and students for a variety of hands-on training and developmental opportunities.

One such example is the **CubeSats Initiative in Canada for STEM (CUBICS)**: with guidance and funding from the CSA, nine Canadian university teams will design, build, launch and operate their own space science missions using miniature satellites known as CubeSats. This initiative is designed to provide students with hands-on experience to complement their studies and make them standout candidates for Canada's space workforce.

In line with the research and knowledge sharing theme, the CSA will continue to support Canada's response to climate change risks and extreme weather events by providing EO data to help scientists, policy-makers, and stakeholders understand our planet's dynamic environment.

Furthermore, in support of its reconciliation efforts, the CSA is committed to open and transparent partnerships with Indigenous communities to co-develop solutions based on traditional knowledge that address community-identified needs. The CSA will also pursue its existing partnerships to advance innovation in Canada's North, enhance access to STEM careers, and bolster local economies by bringing the benefits of satellite EO technologies directly to Northern communities and therefore promoting knowledge and skills for sustainable development.

Target theme: Training and skills in sustainable development

Target: By December 2025, Canada's pool of science talent grows by 175,000 science, technology, engineering and mathematics (STEM) graduates (Minister of Innovation, Science and Industry)

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
Other	<p>Implement the CUBICS funding initiative, which provides post-secondary institutions across Canada with an opportunity to engage their students in a real space mission by supporting the design, development, launch, and operations of student CubeSats.</p> <p>Program: Space Capacity Development Program (SCDP)</p>	<p>Performance indicator: Number of students involved in the CUBICS projects</p> <p>Starting point: New initiative (2022-09-14: Announcement of opportunity publication date).</p> <p>Target: 285 (number of expected yearly students involved from 2023-24 to 2025-26).</p>	<p>It is expected that, through this unique hands-on experience, students will develop invaluable skills to support their transition into the Canadian space workforce. The provision of professional and skills development programs such as CUBICS will introduce students to space-STEM fields, engage students in real space missions, and promote employment in the Canadian space sector.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 4.1:</i> Canadians have access to inclusive and quality education throughout their lives.</p> <p><i>CIF Indicator 4.2.1:</i> Post-secondary education attainment rate.</p> <p><i>GIF Indicator 4.3.1:</i> Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex.</p>



Target theme: Research and knowledge sharing

Target: By 2025, Canada's Average Relative Citation (ARC) in natural sciences, engineering, and life sciences ranks within the top 10 of OECD countries, increasing from a ranking of 18 in 2020 (Minister of Innovation, Science and Industry)

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Work with partners on sustainable development and research initiatives</p>	<p>Ensure the continuous delivery of data from Earth observation (EO) satellites to national and international partners to increase scientific knowledge in Earth surface science, atmospheric science and, solar-terrestrial science to foster the understanding and management of climate change risks and extreme weather events.</p> <p>Program : Space Utilization</p>	<p>Performance indicator: Scientific peer-reviewed publications enabled by Space Utilization Program (SUP) funding in the Earth surface science, atmospheric science and solar-terrestrial science fields.</p> <p>Starting point: 1306 in 2021.</p> <p>Target: 1448 publications in 2025 (reporting year 2026-27)</p>	<p>Through the continuous delivery of Earth observation satellite data to Canadians and international partners, the CSA is sharing valuable information that is key to the fight against climate change. The use of this data by research institutions and researchers results in advancing scientific knowledge in the sustainable development domain.</p> <p>Relevant targets or ambitions : <i>GIF Target 4.7:</i> By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles.</p>



IMPLEMENTATION STRATEGIES SUPPORTING THE GOAL

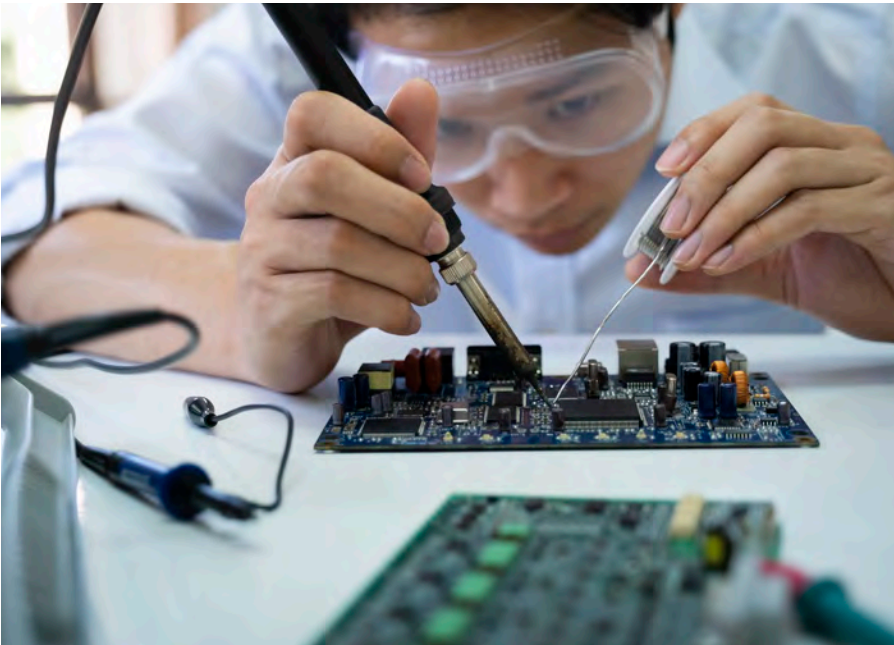
This section is for implementation strategies that support the goal “Promote knowledge and skills for sustainable development” but not a specific FSDS target.

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
Support capacity in Indigenous communities.	<p>In collaboration with NASA, deliver workshops and training on EO applications through the CSA's annual participation to the Indigenous Mapping Workshop (IMW).</p> <p>Program: Space Utilization</p>	<p>Performance indicator: Number of CSA participation to the IMW.</p> <p>Starting point: 3 participations in the IMW as of 2023–2024.</p> <p>Target: 6 participations in 2026–2027 (Maintain CSA's annual participation to the IMW).</p>	<p>Led by the Indigenous Mapping Collective, the objective of the workshops is to give Indigenous peoples' access to the tools and technology they need to map their lands, share their stories, and support their rights and interests.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 4.2</i> : Canadians have access to inclusive and quality education throughout their lives.</p> <p><i>GIF Target 4.4</i>: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship.</p>



INITIATIVES ADVANCING CANADA'S IMPLEMENTATION OF SDG 4 – QUALITY EDUCATION

The following initiatives demonstrate how the Canadian Space Agency's programming supports the 2030 Agenda and the SDGs, supplementing the information outlined above.

PLANNED INITIATIVES	ASSOCIATED DOMESTICS TARGETS OR AMBITIONS AND/OR GLOBAL TARGETS
<p>The CSA's Youth Learning initiative</p> <p>Through this initiative, the CSA is providing inclusive educational activities and resources for youth with the goal of inspiring them to stay in school and pursue careers in space-STEM fields. The CSA's Youth Learning activities focus on using the captivating nature of space to motivate Canada's pool of future science talent.</p> <p>The CSA's Youth Learning initiative contributes to the long-term advancement of space-STEM education, youth engagement with space, and careers in the Canadian space sector. Through this initiative, the CSA is making agency-wide efforts to advance Government of Canada priorities such as a diverse and highly skilled workforce; digital skills and literacy; and attracting, training and retaining the talent.</p>	<p>FSDS target: By December 2025, Canada's pool of science talent grows by 175,000 science, technology, engineering and mathematics (STEM) graduates (Minister of Innovation, Science and Industry).</p> <p>CIF target 4.2.1: Post-secondary education attainment rate</p> <p>GIF target 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.</p>
	



GOAL 5 **CHAMPION GENDER EQUALITY**

FSDS CONTEXT

Championing gender equality is a shared responsibility across the CSA. Since 2017, the CSA's GBA Plus Policy requires that all CSA initiatives (e.g., policies, legislation, projects, contracts, grants, and contributions) that are new, or which need re-approval, be subject to a GBA Plus analysis to ensure that they do not reproduce or reinforce systemic disadvantage equity-seeking groups. The overarching goal is fairness and inclusion to ensure that the benefits of space can reach everyone in Canada.

To advance gender equality and empower all women and girls in the space sector¹, CSA initiatives focus on three key areas:

- Inspiring K-12 girls and other systemically disadvantaged groups of youth to pursue careers in science, technology, engineering, and mathematics (STEM) sectors.
- Providing hands-on job experience and training opportunities in the space sector to students, including women and other systemically disadvantaged groups.
- Encouraging the space sector to recruit and retain women and other systemically disadvantaged groups.

¹ The Canadian space sector is defined as organizations (private, public and academic) whose activities include the development and use of space assets and/or space data as defined in the Canadian Space Sector Survey.

Lastly, the CSA is co-hosting, with the United Nations Office of Outer Space Affairs (UNOOSA), the fourth edition of the Space4Women Expert Meeting in Montreal in 2023. This year's theme is to build capacity to advance gender equality and empower all women and girls in the space sector.



Target theme: Take Action on Gender Equality

Target: By 2026, at least 37% of the environmental and clean technology sector are women (Minister of Innovation, Science and Industry)

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Reduce systemic barriers to gender equality</p>	<p>Reduce systemic barriers to gender equality and diversity in the space sector through the application of a Gender-based Analysis Plus (GBA Plus) lens for all its initiatives..</p> <p>Program :</p> <ul style="list-style-type: none"> Space Capacity Development Program Space Exploration Program Space Utilization Program 	<p>Performance indicator: Percentage of women in the Canadian space sector.</p> <p>Starting point: In 2021, 29% of the Canadian space sector workforce were women.</p> <p>Target: Have women represent 30% of the Canadian space sector workforce 2026-27.</p>	<p>By incorporating diverse perspectives and considering factors like race, ethnicity, age, and socioeconomic status in the CSA's policies, programs, and initiatives, GBA Plus aims to reduce barriers to gender equality in the space sector.</p> <p>Relevant targets or ambitions: : <i>CIF Ambition 5.2:</i> Gender equality in leadership roles and at all levels of decision-making. .</p> <p><i>CIF Indicator 5.2.1:</i> Proportion of leadership roles held by women.</p> <p><i>GIF Ambition 5.5:</i> Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic, and public life.</p>



IMPLEMENTATION STRATEGIES SUPPORTING THE GOAL

This section is for implementation strategies that support the goal “Champion gender equality” but not a specific FSDS target.

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
Disaggregate data.	<p>Update the CSA's data collection tools to gather more disaggregated data to monitor gender and diversity results and evaluate the CSA's impacts to inform decision-making and the design of GBA Plus specific initiatives² .</p> <p>Program: Space Capacity Development Space Exploration Space Utilization Internal Services</p>	<p>Performance indicator: Percentage of CSA programs reporting on gender results.</p> <p>Starting point: In 2021–22, 100% of CSA programs reported on gender results</p> <p>Target: 100%</p>	<p>By updating its monitoring tools, the CSA will enhance its capacity to report on gender and diversity and will be better positioned to design key initiatives to address identified gender equality gaps within the space sector.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 5.2:</i> Gender equality in leadership roles and at all levels of decision-making. <i>CIF Indicator 5.2.1:</i> Proportion of leadership roles held by women. <i>GIF Target 5.1:</i> End all forms of discrimination against all women and girls everywhere. <i>GIF Indicator 5.5.2:</i> Proportion of women in managerial positions.</p>

² GBA Plus initiatives are activities that are designed to increase equitable access and representation among diverse groups of people (i.e., women, Indigenous peoples, persons with disabilities, visible minorities/racialized populations, 2SLGBTQI+ communities, rural or remote populations, etc.).

INITIATIVES ADVANCING CANADA’S IMPLEMENTATION OF SDG 5 – GENDER EQUALITY

The following initiatives demonstrate how the Canadian Space Agency’s programming supports the 2030 Agenda and the SDGs, supplementing the information outlined above.

PLANNED INITIATIVES	ASSOCIATED DOMESTICS TARGETS OR AMBITIONS AND/OR GLOBAL TARGETS
<p>UN/Canada Space4Women Expert Meeting</p> <p>The United Nations Office of Outer Space Affairs (UNOOSA) and the Canadian Space Agency (CSA) will co-host the 4th edition of the Space4Women Expert Meeting in Montreal in 2023. This year’s theme is building capacity to promote and advance gender equality and empower all women and girls in the space sector.</p> <p>Meeting participants will take part in various activities, including working group sessions to prepare the first gender mainstreaming toolkit dedicated to the space sector. This toolkit will include best practices, guidance, and resources to support public and private institutions, and individuals to integrate gender and diversity considerations at various levels and in different contexts with the goal of advancing gender equality.</p> <p>It is our intention to have this toolkit published and disseminated by the UN at the 67th Committee on the Peaceful Uses of Outer Space in June 2024.</p>	<p>The 2023 Expert Meeting aligns with two relevant domestic and global targets and ambitions:</p> <p>SDG 4: Quality Education</p> <p><i>CIF Ambition 4.1:</i> Canadians have access to inclusive and quality education throughout their lives.</p> <p><i>CIF Indicator 4.2.1:</i> Post-secondary education attainment rate.</p> <p><i>GIF Indicator 4.4.1:</i> Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill..</p> <p>SDG 5: Achieve gender equality and empower all women and girls</p> <p><i>CIF Ambition 5.2:</i> Gender equality in leadership roles and at all levels of decision-making.</p> <p><i>CIF Indicator 5.2.1:</i> Proportion of leadership roles held by women.</p> <p><i>GIF Indicator 5.5.1:</i> Proportion of seats held by women in (a) national parliaments and (b) local governments; proportion of women in managerial positions.</p>



GOAL 8 **ENCOURAGE INCLUSIVE AND SUSTAINABLE** **ECONOMIC GROWTH IN CANADA**

FSDS CONTEXT

There is a growing need within Canada, and globally, to more effectively address the environmental and socioeconomic challenges that societies face to mitigate the effects of climate change. A variety of destabilizing crises make it difficult to increase the productivity and advancement of Canada's prosperity while also protecting our environment. The development of space technologies acts as a tool to improve sustainable economic growth in the country. Two examples are given to support SDG8.

The CSA's **smartEarth initiative** is anchored in the document "**Towards Canada's 2030 Agenda National Strategy**," which describes Canada's priorities and commitments towards achieving the SDGs. The smartEarth initiative intends to address Canada's most pressing challenges, such as resilient infrastructures, agriculture, ecosystems, and pollution monitoring. By stimulating the uptake of space-borne data, the initiative aims to develop capacities within the industry and academia to accelerate innovation in the delivery of space-based applications to answer global environmental challenges. The creative solutions stemming from the space-based applications will generate sustainable growth by enhancing the competitiveness of the Canadian space sector while also developing a highly qualified workforce.

The Canadian Space Agency's Space Technology Development Program (STDP) supports innovation and growth in the Canadian space industry with a focus on small and medium enterprises (SMEs). It also aims to reduce technological unknowns in future space missions. By providing initial funds to support the development of innovative technologies with strong potential and enhance the competitiveness and capabilities of the Canadian space industry, the STDP encourages inclusive and sustainable growth in Canada.



INITIATIVES FAISANT PROGRESSER LE PROGRAMME 2030 DU CANADA ET L'ODD 8 – TRAVAIL DÉCENT ET CROISSANCE ÉCONOMIQUE

The following initiatives demonstrate how the Canadian Space Agency's programming supports the 2030 Agenda and the SDGs, supplementing the information outlined above.

PLANNED INITIATIVES	ASSOCIATED DOMESTICS TARGETS OR AMBITIONS AND/OR GLOBAL TARGETS
<p>1 - smarthEarth initiative</p> <p>The funding offered by this initiative will enable more organizations and highly qualified personnel to engage in projects that encourage the development of space-based solutions to environmental challenges. The targeted nature of this program will create higher levels of economic productivity and support Canadian workers in sustainable development areas.</p> <p>2 - Space Technology Development Program</p> <p>The objectives pursued by this initiative are to support innovation for the growth of the Canadian space sector and to reduce the technological unknowns of future space missions while also developing the expertise required for the future. The initiative provides support through contracts and contribution agreements with Canadian organizations that are selected based on their capacity to advance the development of specific space technologies.</p>	<p><i>CIF Ambition 8.1:</i> Canadians have access to quality jobs.</p> <p><i>CIF Indicator 8.2.1:</i> Proportion of 15+ employees earning less than 66% of the median hourly wage of permanent full-time 15+ employees.</p> <p><i>GIF Target 8.2:</i> Achieve higher levels of economic productivity through diversification, technological upgrading, and innovation, including through a focus on high value added and labour-intensive sectors.</p> <p><i>GIF Indicator 8.2.1:</i> Annual growth rate of real GDP per employed person.</p> <p><i>CIF Ambition 8.1:</i> Canadians have access to quality jobs.</p> <p><i>CIF Indicator 8.2.1:</i> Proportion of 15+ employees earning less than 66% of the median hourly wage of permanent full-time 15+ employees.</p> <p><i>GIF Target 8.2:</i> Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors.</p> <p><i>GIF Indicator 8.2.1:</i> Annual growth rate of real GDP per employed person.</p>



GOAL 10

ADVANCE RECONCILIATION WITH INDIGENOUS PEOPLES AND TAKE ACTION ON INEQUALITY

FSDS CONTEXT

The CSA is headquartered on the traditional and unceded territory of the Kanien'kehá: ka (people of the flint) (Mohawk Nation), part of the Haudenosaunee (people of the longhouse) Confederacy. We recognize the Kanien'kehá: ka Nation as the custodians of the lands and waters of Tiohtiá: ke (Montreal), which has long been a gathering place for diverse First Nations, including Algonquin-Anishinaabe, Atikamekw, and Huron-Wendat. Recognizing and celebrating First Nations, Inuit, and Métis Peoples and all of their contributions to STEM and to the studies of stars, the CSA seeks to increase its collaboration and build sustainable, mutually beneficial relationships with Indigenous Peoples, based on the principle of co-development, and increase their participation in space-related activities. Building on previous successful collaborations and existing relationships, the CSA aims to expand its engagement with First Nations, Inuit, and Métis Peoples to increase their participation in CSA programs. This includes using the unique appeal of space to inspire Indigenous students to pursue careers in Canada's space workforce, fostering Indigenous participation through specific initiatives and projects and, increasing the number of Indigenous Peoples hired by the CSA.

The CSA is committed to renewing and strengthening its economic relationships with Indigenous entrepreneurs and communities. Through the Procurement Strategy for Indigenous Business (PSIB), the CSA will harness procurement planning to capitalize on existing buying power and the empowerment of Indigenous business capacity in relevant commodities, including contracts issued on behalf of the CSA. Ultimately, the PSIB aims to increase the number of Indigenous businesses in the space and R&D sectors. In accordance with government directives, the CSA also plans to award 5% of its eligible contracts to Indigenous businesses and, in collaboration with the space sector, Indigenous businesses, and Indigenous Services Canada, co-develop long-term strategies to increase Indigenous involvement in general over time.

Additionally, through the Grants and Contributions Program and targeted youth-focused activities, the CSA encourages Indigenous youth to take an active interest in space with the aim of increasing the number of Indigenous employees and entrepreneurs in Canada's space workforce.

The CSA is committed to attracting and retaining top talent and being a diverse workforce. The CSA has adopted inclusive hiring practices that will create a makeup of the workforce that reflects labour market availability.

The CSA has undertaken, in collaboration with its employee networks and bargaining agents, the development of a new three-year recruitment strategy that includes targeted processes to increase Indigenous representation at the CSA, including at the management and executive levels. The CSA will also continue the implementation of its **Accessibility Plan** which aims to increase access to employment and promotional opportunities for employees and job seekers with disabilities so they can contribute to their full potential and regard the CSA as an employer of choice. Furthermore, there is currently a review of the CSA's Human Resources employment systems that seeks to identify ways to improve support and remove potential barriers to accessibility for women, Indigenous persons, persons with a disability, and members of a visible minority.

Target theme: Advancing reconciliation with First Nations, Inuit, and the Métis communities.

Target: Between 2023 and 2026, and every year on an ongoing basis, develop and table annual progress reports on implementing the United Nations Declaration on the Rights of Indigenous Peoples Act (Minister of Justice and Attorney General of Canada).

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Implement the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) Act.</p>	<p>Increase the participation of Indigenous Peoples in Canada's Space Program.</p> <p>Program: All CSA programs and Internal Services</p>	<p>Performance indicator: Number of initiatives fostering Indigenous participation.</p> <p>Starting point: 6 in 2022-23.</p> <p>Target: 10 in 2026-27.</p>	<p>The implementation of the UNDRIP Act will cement the government's commitment to advancing reconciliation with Indigenous peoples.</p> <p>The advancement of Indigenous participation in Canadian space programs will further engage Indigenous peoples in the space sector and result in the establishment of new, long-standing relationships.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 10.1:</i> Canadians live free of discrimination and inequalities are reduced. <i>GIF Target 10.2:</i> By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.</p>



Target theme: Taking action on inequality

Target: Each year, the federal public service meets or surpasses the workforce availability for women, Indigenous persons, persons with a disability, and members of a visible minority (President of the Treasury Board)

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Advance gender equality in the Government of Canada.</p>	<p>Renew and implement the CSA's recruitment strategy to ensure that the representation rate of women in the workforce and in senior leadership positions meets or surpasses their workforce availability (WFA) rates.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage of the CSA's workforce who identified as female.</p> <p>Starting point: 46.7% of the CSA's workforce identified as female as of March 31, 2023.</p> <p>Target: Equal to or greater than 38.4% of the CSA's workforce identified as female by 2027³.</p> <p>Performance indicator: Percentage of senior leadership positions at the CSA occupied by females.</p> <p>Starting point: 38.7% of senior leadership positions at the CSA were occupied by females as of March 31, 2023.</p> <p>Target: Equal to or greater than 31.5% of senior leadership positions at the CSA to be occupied by females by 2027³.</p>	<p>By establishing baselines when it comes to representation rates, the CSA will be able to reflect on why certain targets were/were not met and introduce policies and procedures that aim to resolve gaps in representation. Thus, the implementation of the Equity, Diversity, and Inclusion Strategy will provide the CSA with the information needed to do whatever is needed to advance gender equality throughout the department.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 10.1:</i> Canadians live free of discrimination and inequalities are reduced.</p> <p><i>CIF Indicator 10.2.1:</i> Proportion of the population reporting discrimination or unfair treatment.</p> <p><i>CIF Indicator 10.3.1:</i> Median hourly wage ratio.</p> <p><i>GIF Target 10.2:</i> By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.</p>

³ La cible est basée sur le taux de disponibilité de l'effectif le plus récent.

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Foster diversity, inclusion and accessibility in the federal public service.</p>	<p>Renew and implement the CSA's recruitment strategy to ensure that the CSA's workforce reflects the diversity that characterizes the Canadian population.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage of the CSA's workforce who identifies as a visible minority</p> <p>Starting point: 19.7% of the CSA's workforce identified as a visible minority as of March 31, 2023.</p> <p>Target: Equal to or greater than 21.2% of the CSA's workforce identified as a visible minority by 2027³.</p> <p>Performance indicator: Percentage of senior leadership positions at the CSA occupied by visible minority members.</p> <p>Starting point: 9.7% of senior leadership positions at the CSA were occupied by visible minority members as of March 31, 2023.</p> <p>Target: Equal to or greater than 17.4% of senior leadership positions at the CSA to be occupied by visible minority members by 2027.³</p> <p>Performance indicator: Percentage of the CSA's workforce who identified as a person with disabilities.</p> <p>Starting point: 7.5% of the CSA's workforce identified as a person with disabilities as of March 31, 2023.</p> <p>Target: Equal to or greater than 8.6% of the CSA's workforce identified as a person with disabilities by 2027³.</p> <p>Performance indicator: Percentage of senior leadership positions at the CSA occupied by a person with disabilities.</p> <p>Starting point: 9.7% of senior leadership positions at the CSA were occupied by a person with disabilities as of March 31, 2023.</p> <p>Target: Equal to or greater than 5.4% of senior leadership positions at the CSA occupied by persons with disabilities by 2027³.</p>	<p>The recruitment strategy will foster diversity, inclusion, and accessibility in the federal public service by prioritizing outreach and engagement with underrepresented groups, implement bias-free recruitment process, provide accommodations for individuals with disabilities, and establish mentorship and support programs to ensure an inclusive and equitable workplace.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 10.2:</i> Canadians live free of discrimination and inequalities are reduced.</p> <p><i>CIF Indicator 10.2.1:</i> Proportion of the population reporting discrimination or unfair treatment.</p> <p><i>GIF Target 10.2:</i> By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.</p>

IMPLEMENTATION STRATEGIES SUPPORTING THE GOAL

This section is for implementation strategies that support the goal “Advance reconciliation with Indigenous Peoples and take action on inequality” but not a specific FSDS target

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Increased Indigenous employment in the federal public service.</p>	<p>Renew and implement the CSA's recruitment strategy to ensure Indigenous representation within the CSA's workforce.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage of the CSA's workforce who identifies as Indigenous.</p> <p>Starting point: 1.9% of the CSA's workforce identified as Indigenous as of March 31, 2023.</p> <p>Target: Equal to or greater than 0.9% of CSA's workforce to identify as Indigenous by 2027.³</p> <p>Performance indicator: Percentage of senior leadership positions at the CSA occupied by Indigenous people.</p> <p>Starting point: 3.2% of senior leadership positions at the CSA were occupied by Indigenous people as of March 31, 2023.</p> <p>Target: Equal to or greater than 2.8% of senior leadership positions at the CSA to be occupied by Indigenous people by 2027.³</p>	<p>The CSA seeks to continue its commitments to promoting Indigenous representation in its workforce to align itself with labour market availability levels. Promoting Indigenous employment in the CSA will both advance reconciliation efforts and engage Indigenous peoples in the space sector.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 10.1:</i> Canadians live free of discrimination and inequalities are reduced.</p> <p><i>GIF Target 10.3:</i> Ensure equal opportunity and reduce inequalities of outcomes, including by eliminating discriminatory laws, policies and practices and promoting appropriate legislation, policies and action in this regard.</p> <p><i>GIF Indicator 10.3.1:</i> Proportion of population reporting having personally felt discriminated against or harassed within the previous 12 months on the basis of a ground of discrimination prohibited under international human rights law.</p>



IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Support economic development and entrepreneurship in Indigenous communities.</p>	<p>In collaboration with industries, Indigenous businesses and Indigenous Services Canada, the CSA will develop long-term strategies to increase Indigenous business capacity in the space sector over time. Presently, the CSA is including requirements to subcontract parts of our major crown space project to Indigenous businesses or include mandatory Indigenous participation plan in our requests for proposals.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage of CSA contracts awarded to Indigenous businesses.</p> <p>Starting point: 4% of the CSA's eligible contracts were awarded to Indigenous businesses in 2022-23.</p> <p>Target: Starting in 2023-24, award 5% of the CSA's eligible contracts to Indigenous businesses annually.</p>	<p>The CSA seeks to collaborate and build relationships with Indigenous communities and organizations. The CSA wishes to promote meaningful engagement and participation in space-related activities to ensure that its projects are respectfully co-developed with Indigenous partners. By doing so, the CSA will support economic development and entrepreneurship in Indigenous communities.</p> <p>Relevant targets or ambitions: <i>ClF Ambition 10.1:</i> Canadians live free of discrimination and inequalities are reduced.</p> <p><i>GIF Target 10.2:</i> By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.</p>



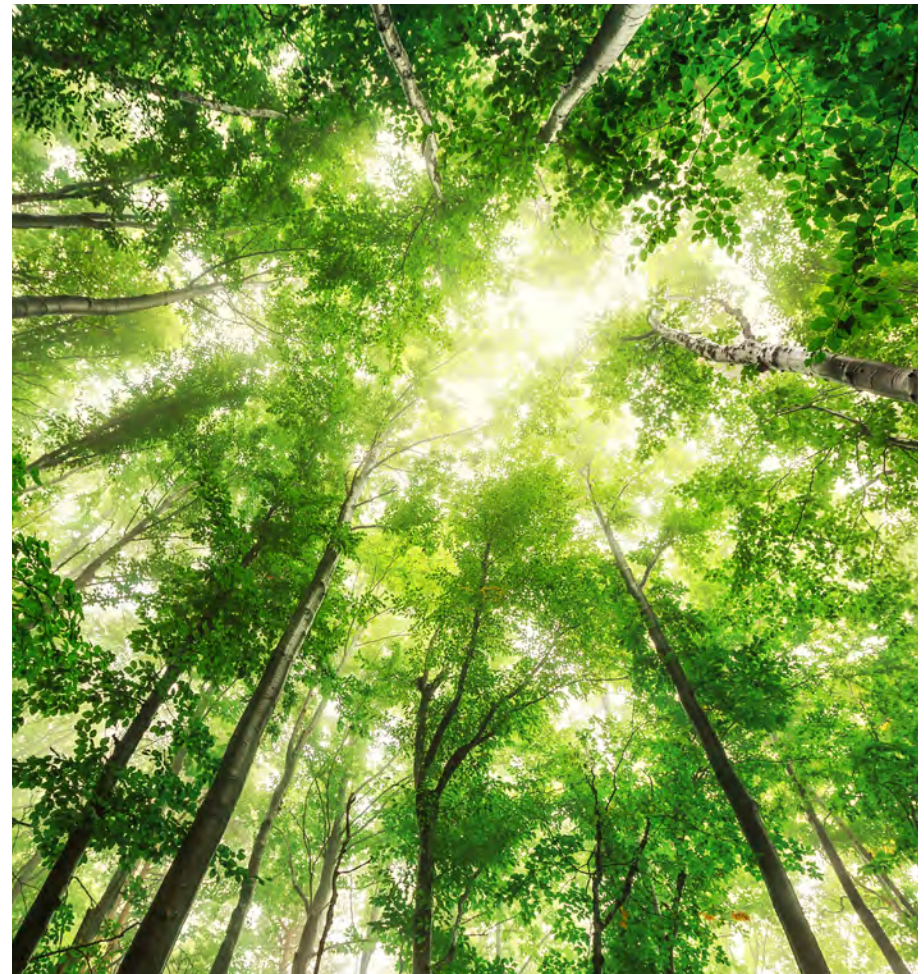
GOAL 12 **REDUCE WASTE AND TRANSITION TO ZERO-EMISSION VEHICLES**

FSDS CONTEXT

The government of Canada deploys a variety of strategies and policies to ensure sustainable consumption and production practices within its federal activities; this is a direct effort to follow the government's ambition to consume in a sustainable manner. To tackle this challenge, the Greening Government Strategy (GGS) and the Policy on Green Procurement were created to reduce the environmental impacts of government operations, promote environmental stewardship, and adapt to climate change.

Through the implementation of the GGS, the CSA has committed to supporting responsible consumption and production by actively working on three key priorities: reducing waste, transitioning to a zero-emission vehicle fleet (ZEVs), and greening its procurement activities. Waste audits were completed in 2019 to identify opportunities for diverting and reducing waste. The CSA's recycling program was renewed to include the installation of new sorting stations and the implementation of organic waste collection. Since 2018, all of the CSA's new purchased vehicles are zero-emission vehicles or hybrids, including a fully electric vehicle. The CSA is also proactive in organizing activities to give its employees an opportunity to be involved in environmental protection initiatives (micro forest plantation, bicycle repair workshops, newsletters, etc.). In 2022–2023, the CSA analyzed its procurement profile and identified its most important purchases in terms of categories (goods, services or construction), volume, and expenses. The results were used to conduct a carbon footprint study, which identified the procurement categories with the greatest environmental impacts. Lastly, a strategy and action plan to reduce the environmental impacts of the CSA's business air travel were developed. These initiatives will be pursued throughout this 2023–2027 DSDS.

Looking ahead, the CSA will show leadership in ensuring that future expenditures are net zero and in line with the sustainability and circular economy principles. The CSA will also continue implementing guidance, tools, and training for its employees to support green procurement and encouraging low-carbon mobility (carpooling, public transit, cycling) and employees' mobilization and awareness. Those actions are steps toward reaching a sustainability culture in the workplace.



Target theme: Federal Leadership on Responsible Consumption

Target: By 2030, the Government of Canada will divert from landfill at least 75% by weight of non-hazardous operational waste (All Ministers)

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Maximize diversion of waste from landfills.</p>	<p>Strengthen the CSA management waste program to increase the diversion rate of non-hazardous operational waste.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage by weight of non-hazardous operational waste diverted from landfills.</p> <p>Starting point: In 2019, the non-hazardous operational waste diversion rate was 48%.</p> <p>Target: Divert at least 75% by weight of non-hazardous operational waste from landfills annually by 2030.</p>	<p>By diverting and reducing waste, the CSA contributes to the FSDS goal and target of diverting at least 75% by weight of non-hazardous waste. A better waste management program will ensure that recycling and composting are maximized, which reduces the emissions generated by the transportation and disposal of waste. Material recovery via recycling reduces emissions for the extraction and production of raw materials.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 12.3:</i> Canadians consume in a sustainable manner.</p> <p><i>CIF Indicator 12.3.1:</i> Total waste diversion per capita.</p> <p><i>GIF Ambition 12.5:</i> By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse.</p> <p><i>GIF Indicator 12.5.1:</i> National recycling rate, tons of material recycled.</p>

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Maximize diversion of waste from landfills.</p>	<p>Complete new waste audits for the CSA's primary facilities to update waste diversion statistics, measure progress and submit annual reporting.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage by weight of non-hazardous operational waste diverted from landfills.</p> <p>Starting point: In 2019, the non-hazardous operational waste diversion rate was 48%.</p> <p>Target: Divert at least 75% by weight of non-hazardous operational waste from landfills annually by 2030.</p>	<p>Auditing, tracking, and disclosing waste quantity and type, allows for a better understanding of the CSA's waste production which is needed to raise awareness, identify diversion and reduction opportunities, and prioritize actions. With these actions, the CSA contributes to supporting the FSDS goal and target of diverting at least 75% of non-hazardous waste by weight.</p> <p>Relevant targets or ambitions: <i>GIF Target 12.5:</i> By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse. <i>GIF Indicator 12.5.1:</i> National recycling rate, tons of material recycled.</p>

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Maximize diversion of waste from landfills.</p>	<p>Increase, track and disclose the plastic waste diversion rate.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage (%) of plastic waste by weight diverted from landfills.</p> <p>Starting point: In 2019, the plastic waste diversion rate was 30%.</p> <p>Target: Divert at least 75% by weight of plastic waste from landfills annually by 2030.</p>	<p>The CSA is taking action to reduce plastic waste (e.g., increasing awareness for better plastic waste sorting, eliminating single-use plastics in operations, events, and meetings, reducing procurement of plastic goods, etc.) and contributes to the goals and targets on plastic of the FSDS, Canada's 2030 agenda and SDGs.</p> <p>Plastic recycling is a real challenge that needs to be addressed at its source. By eliminating plastic in operations, events, and meetings, and raising awareness, we can contribute to reducing the pollution created by plastic waste and better protect the environment from microplastics, including marine pollution in oceans.</p> <p>Relevant targets or ambitions: <i>GIF Target 12.5:</i> By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse. <i>GIF Indicator 12.5.1:</i> National recycling rate, tons of material recycled.</p>

Target: By 2030, the Government of Canada will divert from landfill at least 90% by weight of all construction and demolition waste (All Ministers)

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Maximize diversion of waste from landfills.</p>	<p>Ensure all required⁴ construction projects track and disclose the amount of construction and demolition waste generated, as well as the amount diverted from landfills. This can include preliminary waste audits, waste reduction work plans, waste management strategies, tracking and reporting the quantity of waste, etc.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage by weight of all construction, renovation and demolition (CRD) waste diverted from landfills.</p> <p>Starting point: In 2022–2023, no completed projects were subjected to the requirement.</p> <p>Target: Divert at least 90% by weight of all CRD waste from landfills annually by 2030.</p>	<p>By tracking and diverting its CRD waste, the CSA not only contributes to the FSDS's goal and target, but also contributes to reducing scope 3 greenhouse gas (GHG) emissions created by waste generation, transportation, and disposal. Reducing CRD waste at the source can also contribute to reducing the emissions related to the extraction, production, and use of construction material. Lastly, this initiative contributes to enhancing collaboration with suppliers, thus contributing to an overall transition in the industry.</p> <p>This will be achieved by ensuring CRD waste management is included in all contracting components of a construction project, and by following the government's and industry's best practices.</p> <p>Relevant targets or ambitions: <i>GIF Target 12.4:</i> By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.</p> <p><i>GIF indicator 12.4.1:</i> Hazardous waste generated per capita</p> <p>Proportion of hazardous waste treated, by type of treatment.</p>

⁴ Actual requirements are for projects above \$5 million. Most of the CSA's construction projects are less than \$5 million. To better reflect this reality, the CSA will look into lowering the \$5 million threshold to increase CRD diversion opportunities, when possible, to divert a greater quantity of waste..

Target: The Government of Canada’s procurement of goods and services will be net-zero emissions by 2050, to aid the transition to a net-zero, circular economy (All Ministers)

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Disclose embodied carbon in construction.</p>	<p>The CSA will track and disclose the embodied carbon in the structural materials of major construction projects, starting with concrete. As stated in the GGS, the CSA is also required to reduce the embodied carbon of structural materials.</p> <p>Therefore, to achieve this target, the CSA will incorporate embodied carbon disclosure requirements in all major construction project phases, as well as in the procurement processes to make sure that embodied carbon is being reported and reduced.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage of major construction projects that disclosed the embodied carbon of structural materials used.</p> <p>Starting point: No data—New initiative since December 2022.</p> <p>Target: 100% of major construction projects disclose the embodied carbon of structural materials used yearly.</p> <p>Performance indicator: Percentage of major construction projects that reduced embodied carbon by at least 10%.</p> <p>Starting point: No data—New initiative since December 2022.</p> <p>Target: Starting with concrete, 100% of major construction projects will reduce embodied carbon by at least 10%.</p>	<p>By tracking, disclosing, and reducing the embodied carbon in the structural materials of construction projects, the CSA is helping the Government of Canada’s procurement transition towards a net-zero economy to achieve net-zero greenhouse gas (GHG) emissions by 2050.</p> <p>Reducing embodied carbon at the source can also contribute to the reduction of emissions related to the extraction, production and use of construction material and raw resources. Finally, this initiative also contributes to enhancing collaboration with the suppliers, thus contributing to an overall transition in the industry.</p> <p>Relevant targets or ambitions: <i>GIF Target 12.2:</i> By 2030, achieve the sustainable management and efficient use of natural resources.</p> <p><i>GIF Indicator 12.2.1:</i> Material footprint, material footprint per capita, and material footprint per GDP.</p>

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Incentivize supplier disclosure.</p>	<p>The CSA will ensure that processes for procurement over \$25 million including taxes apply the Policy on Green Procurement standard which induces suppliers to measure and disclose their greenhouse gas emissions and adopt a science-based target to reduce greenhouse gas emissions in line with the Paris Agreement as part of participating in the Net-Zero Challenge or an equivalent initiative or standard.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage of CSA contracts over \$25 million that applied the Policy on Green Procurement standard.</p> <p>Starting point: No data yet—New initiative since April 2023.</p> <p>Target: Starting in 2023-24, 100% of CSA's contracts over \$25 million recipients had applied the standard.</p>	<p>The CSA is responsible for ensuring that the obligations of this standard are included in its departmental procurement policies and processes.</p> <p>With this departmental action, the CSA is encouraging suppliers to reduce the environmental impacts from their supply chain and the goods and services they deliver. It is also ensuring responsible consumption for high expenditure procurement and directly contributes to the FSDS's and GGS's target of helping the Government of Canada's procurement of goods and services to yield net-zero emissions by 2050.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 12.2:</i> Canadians consume in a sustainable manner.</p> <p><i>CIF Indicator 12.2.1:</i> Proportion of businesses that adopted selected environmental protection activities and management practices.</p> <p><i>GIF Target 12.6:</i> Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.</p> <p><i>GIF Indicator 12.6.1:</i> Number of companies publishing sustainability reports.</p>



IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Transform the federal light-duty fleet.</p>	<p>The CSA will take actions to decarbonize its fleet by:</p> <ul style="list-style-type: none"> - Purchasing hybrid or zero-emission vehicles (ZEVs) when replacing a vehicle; and -Ensuring that the conventional light-duty fleet will comprise only ZEVs by 2030. <p>Program: Internal Services</p>	<p>Performance indicator: Percentage of annual administrative fleet purchases that are ZEVs or hybrids</p> <p>Starting point: In 2021–22, 100% of annual administrative fleet purchases were ZEVs or hybrids (No purchase in 2022–23).</p> <p>Target: 100% of new light-duty unmodified administrative fleet vehicle purchases yearly are ZEVs or hybrids.</p> <p>Performance indicator: Percentage of ZEVs in administrative fleet</p> <p>Starting point: In 2022–2023, 40% of the CSA's fleet was ZEVs.</p> <p>Target: 100% of the fleet to be ZEVs by 2030.</p>	<p>As conventional gasoline-powered vehicles are increasingly replaced 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 the goal of having 100% of the government's administrative vehicle fleet be ZEVs by 2030 and reduce the total scope 1 GHG emissions of federal operations. It directly contributes to the FSDS's goal and targets for ensuring that the Government of Canada's procurement of goods and services will yield net-zero emissions by 2050.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 12.1:</i> Canadians consume in a sustainable manner. <i>CIF Target 12.1:</i> Zero-emission vehicles represent 10% of new light-duty vehicle sales by 2025, 30% by 2030 and 100% by 2040. <i>CIF Indicator 12.1.1:</i> Proportion of new light-duty vehicle registrations that are zero-emission vehicles. <i>GIF Target 12.7:</i> Promote public procurement practices that are sustainable, in accordance with national policies and priorities. <i>GIF Indicator 12.7.1:</i> Number of countries implementing sustainable public procurement policies and action plans.</p>

INITIATIVES ADVANCING CANADA’S IMPLEMENTATION OF SDG 12 — RESPONSIBLE CONSUMPTION AND PRODUCTION

The following initiatives demonstrate how the CSA’s programming supports the 2030 Agenda and the SDGs, supplementing the information outlined above.

PLANNED INITIATIVES	ASSOCIATED DOMESTICS TARGETS OR AMBITIONS AND/OR GLOBAL TARGETS
<p>1 - Strengthen green procurement criteria</p> <p>The CSA is planning to complete a life cycle assessment (LCA) on a typical large-scale space project to better understand the environmental impacts and carbon reduction opportunities for R&D service contracts and to identify solutions for decarbonizing these contracts.</p> <p>Program: Internal Services</p>	<p>With LCA results available, the CSA will be able to: 1) develop specific criteria that address greenhouse gas emissions reductions for goods and services with a high environmental impact; 2) ensure the criteria for addressing these categories are included in procurement mechanisms and instruments. These actions will help to support the FSDS goal to make Government of Canada’s procurement of goods and services net zero by 2050.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 12.2:</i> Canadians consume in a sustainable manner</p> <p><i>CIF Indicator 12.2.1:</i> Proportion of businesses that adopted selected environmental protection activities and management practices</p> <p><i>GIF Target 12.7:</i> Promote public procurement practices that are sustainable, in accordance with national policies and priorities.</p>
<p>2 - Strengthen green procurement criteria</p> <p>The CSA will continue its effort to include criteria in its contracts that incentivize carbon reduction, sustainable plastics and/or broader environmental benefits in procurement processes and, prioritize goods and services with high environmental impacts. In this regard, the CSA will improve data collection and tracking to enable adequate accountability and reporting of the inclusion of environmental criteria and standards in procurement processes.</p> <p>Program: Internal Services</p>	<p>Incorporating green criteria into purchasing decisions is expected to improve the carbon footprint of the Government’s procurement activities and encourage suppliers to reduce the environmental impact of the goods and services they deliver. It will also contribute to ensuring responsible consumption for internal operations and considering environmental impacts when purchasing goods and services.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 12.2:</i> Canadians consume in a sustainable manner</p> <p><i>CIF Indicator 12.2.1:</i> Proportion of businesses that adopted selected environmental protection activities and management practices.</p> <p><i>GIF Target 12.7:</i> Promote public procurement practices that are sustainable, in accordance with national policies and priorities.</p>

PLANNED INITIATIVES

1 - Strengthen green procurement criteria

In line with the GGS requirements, the CSA will take action regarding in high-impact categories, including:

- Analyzing the departmental procurement profile to identify departmental high-impact categories and major spending areas (completed)
- Developing an action plan to reduce the CSA's procurement environmental impacts.

Program: Internal Services

2 - Strengthen green procurement

The CSA will continue to ensure that all procurement and materiel management specialists are trained in green procurement (such as the Canada School of Public Service course on green procurement or equivalent) within one year of being hired.

Program: Internal Services

ASSOCIATED DOMESTICS TARGETS OR AMBITIONS AND/OR GLOBAL TARGETS

An analysis of the departmental procurement profile will enable the CSA to develop an informed action plan that will reduce the CSA's procurement environmental impacts, strengthening green procurement criteria. Together, these actions will build on the 2022-carbon footprint study of the CSA's procurement activities from 2017–2018 to 2022–2023.

CIF Ambition 12.2: Canadians consume in a sustainable manner.

GIF Indicator 12.2.1: Proportion of businesses that adopted selected environmental protection activities and management practices.

GIF Target 12.7: Promote public procurement practices that are sustainable, in accordance with national policies and priorities.

GIF Indicator 12.7.1: Number of countries implementing sustainable public procurement policies and action plans.

Trained staff are better equipped to incorporate environmental considerations into purchasing decisions, which can motivate suppliers to reduce the environmental impact of the goods and services they deliver and their supply chains.

Relevant targets or ambitions:

CIF Ambition 12.2: Canadians consume in a sustainable manner

GIF Indicator 12.2.1: Proportion of businesses that adopted selected environmental protection activities and management practices.

GIF Target 12.7: Promote public procurement practices that are sustainable, in accordance with national policies and priorities.



GOAL 13 **TAKE ACTION ON CLIMATE CHANGE AND ITS IMPACTS**

FSDS CONTEXT

When it comes to climate change and its impacts, the CSA is taking various actions to meet the Government of Canada’s environmental commitments, not only with the Greening Government Strategy, but also with a variety of Earth observation projects and initiatives.

The CSA is working towards achieving its carbon neutrality goal by 2050 and incorporating sustainable management practices and low-carbon operations in its workplace. Over the 2023–27 period, the CSA will incorporate GHG emission reductions into decision-making processes using a GHG option analysis methodology for major renovations and all other real property projects that affect energy consumption and GHG emissions. The CSA will also continue to report on its environmental performance through the annual inventory declaration of: GHG emissions, vehicle fleet, waste, water, and adaptations to climate change. Lastly, the CSA will ensure that all relevant employees are trained on assessing climate change impacts and undertaking climate change risk assessments.

Earth observations from space is defined as the gathering of data about the Earth’s physical, chemical, and biological systems using satellites. From space, they provide information and services to support global communications, the economy, security and defence, public safety and emergency management, the environment and health. CSA is playing a leading role within the Government of Canada to ensure the accessibility and use of Earth observation data.

Through Earth Observation, the CSA plays a leading role in natural disaster management with its satellites. As the consequences of climate change become more severe, natural disasters will become more frequent and intense. Thus, satellite data has become essential to assist emergency response teams by identifying potentially dangerous sites, assessing the extent of damage, and facilitating rescue operations. Canada’s expertise in Earth observation and synthetic aperture radar data processing assists in disaster management response and relief efforts through the International Charter “Space and Major Disasters Charter”. As of October 2023, and for a period of six months, the CSA will be a leader in assuming the role of the Charter Leading Agency in collaboration with the European Organisation for the Exploitation of Meteorological Satellites.



Target theme: Federal Leadership on Greenhouse Gas Emissions Reductions and Climate Resilience

Target: The Government of Canada will transition to net-zero carbon operations for facilities and conventional fleets by 2050 (All Ministers)

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Implement the Greening Government Strategy through measures that reduce greenhouse gas emissions, improve climate resilience, and green the government's overall operations.</p>	<p>Monitor and disclose environmental performance related to CSA operations, such as GHG emissions, energy, and water consumption, as well as waste for each facility using the RETScreen software.</p> <p>Program: Internal services</p>	<p>Performance indicator: Percentage change in the CSA's GHG emissions between 2005–06 (base year) and the current reporting fiscal year.</p> <p>Starting point: : In 2005–2006, the CSA's total GHG emission was: 2.4 ktCO₂e.</p> <p>In 2022–2023, the CSA's total GHG emission was 1 ktCO₂e, which represents 56% reduction below the 2005–2006 level.</p> <p>Target: Reduce the CSA's total GHG emissions by 40% below the 2005 level by 2025.</p> <p>Reduce the CSA's Total GHG emissions by 90% below the 2005 level by 2050.</p> <p>Reduce the CSA's total GHG emission by an additional 10% every five years, starting in 2025.</p>	<p>By monitoring and disclosing its environmental performance, the CSA is supporting the Government of Canada in measuring and disclosing progress and results to respect its accountability, transparency, and open data principles. The CSA is also contributing to ensure the federal GHG emissions inventory is accurate by providing its operation results and to monitor progress.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 13.1:</i> Canadians reduce their greenhouse gas emissions. <i>CIF Target 13.1:</i> By 2030, reduce Canada's total greenhouse gas emissions by 40 to 45%, relative to 2005 emission levels. By 2050, achieve economy-wide net-zero greenhouse gas emissions. <i>CIF Indicator 13.1.1:</i> Greenhouse gas emissions. <i>GIF Target 13.2:</i> Integrate climate change measures into national policies, strategies and planning. <i>GIF Indicator 13.2.2:</i> Total greenhouse gas emissions per year.</p>

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Implement the Greening Government Strategy through measures that reduce greenhouse gas emissions, improve climate resilience, and green the government's overall operations.</p>	<p>The CSA will participate in government initiatives to purchase megawatt hours of renewable electricity for its sites located where the electrical grids still emit carbon.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage of clean electricity used by the CSA.</p> <p>Starting point: In 2022–23, the CSA used 97% of clean electricity.</p> <p>Target: The CSA will use 100% of clean electricity by 2025.</p>	<p>By using clean electricity in building operations, the CSA will contribute to the elimination of GHG emissions from federal buildings in jurisdictions where electricity generation is not coming from clean renewable sources; thus, the CSA is contributing to the transition to net-zero carbon operations for facilities and conventional fleets by 2050. It also contributes to transitioning to a net-zero economy by enhancing the renewable energy industry economy.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 13.1:</i> Canadians reduce their greenhouse gas emissions.</p> <p><i>CIF Target 13.1:</i> By 2030, reduce Canada's total greenhouse gas emissions by 40 to 45%, relative to 2005 emission levels. By 2050, achieve economy-wide net-zero greenhouse gas emissions.</p> <p><i>CIF Indicator 13.1.1:</i> Greenhouse gas emissions.</p> <p><i>GIF Target 13.2:</i> Integrate climate change measures into national policies, strategies, and planning.</p> <p><i>GIF Indicator 13.2.2:</i> Total greenhouse gas emissions per year</p>

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Implement the Greening Government Strategy through measures that reduce greenhouse gas emissions, improve climate resilience, and greening the government's overall operations.</p>	<p>All newly installed heating, ventilation, air conditioning and refrigeration (HVAC-R) equipment will use refrigerants with global warming potential (GWP) lower than the limits stated by the GGS, unless such equipment and/or refrigerant is found to not be available domestically or its acquisition is not technically or economically feasible.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage of newly installed HVAC-R equipment using refrigerants with GWP lower than the limits stated by the GGS</p> <p>Starting point: In 2022–23, no newly installed HVAC-R equipment.</p> <p>Target: 100% of newly installed HVAC-R equipment using refrigerants with GWP lower than the limits stated by the GGS by 2030.</p>	<p>As the impacts of climate change become more severe, the GGS prompts federal departments and agencies to demonstrate leadership by accelerating the pace of converting or replacing equipment using these gases by 2030. Installing new HVAC-R equipment using refrigerants with lower GWP will contribute to reducing high GWP, ozone depleting refrigerants and hydrofluorocarbons (HFCs), which are targeted under the GGS, as these gases can be long lasting and potent greenhouse gases, with some staying in the atmosphere for centuries. They will also contribute to Canada's objective to phase down HFCs to 15% of calculated baseline levels by 2036 via Environment and Climate Change Canada's (ECCC's) Ozone depleting Substances and Halocarbon Alternatives Regulations (ODSHAR).</p> <p>Relevant targets or ambitions: <i>CIF Ambition 13.1:</i> Canadians reduce their greenhouse gas emissions.</p> <p><i>CIF Target 13.1:</i> By 2030, reduce Canada's total greenhouse gas emissions by 40 to 45%, relative to 2005 emission levels. By 2050, achieve economy-wide net-zero greenhouse gas emissions.</p> <p><i>CIF Indicator 13.1.1:</i> Greenhouse gas emissions.</p> <p><i>GIF Target 13.2:</i> Integrate climate change measures into national policies, strategies and planning.</p> <p><i>GIF Indicator 13.2.2:</i> Total greenhouse gas emissions per year.</p>

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Modernize through net-zero-carbon buildings</p>	<p>Decarbonize the CSA's real property portfolio by implementing measures identified in the carbon-neutrality studies and by outlining the roadmap to carbon neutrality.</p> <p>Program: Internal Services</p>	<p>Performance indicator: Percentage change in the CSA's GHG emissions from facilities operations between 2005–06 (base year) and the current reporting fiscal year.</p> <p>Starting point: In 2005-06, the CSA's total GHG emissions was: 2.4 ktCO₂e.</p> <p>In 2022-23, the CSA's total GHG emission from its facilities operations was 1 ktCO₂e, which represents a 56% reduction below the 2005–2006 level.</p> <p>Target: Reduce the CSA's total GHG emission by 40% below 2005 levels by 2025.</p> <p>Reduce the CSA's total GHG emission by 90% below 2005 levels by 2050.</p> <p>Reduce the CSA's total GHG emission by an additional 10% every 5 years, starting in 2025.</p>	<p>Following the completion of carbon-neutral studies for its two main buildings in 2022 and 2023, the CSA plans to outline the carbon-neutrality strategy roadmap for its portfolio and make sure to align building maintenance strategy with carbon-neutrality study conclusions. All these actions will allow the CSA to reduce its GHG emissions related to the operation of its buildings and to invest in low-carbon renovations. Thus, the CSA will contribute to the reduction of total scopes 1–2 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>Relevant targets or ambitions: <i>CIF Ambition 13.1:</i> Canadians reduce their greenhouse gas emissions. <i>CIF Target 13.1:</i> By 2030, reduce Canada's total greenhouse gas emissions by 40 to 45%, relative to 2005 emission levels. By 2050, achieve economy-wide net-zero greenhouse gas emissions.</p> <p><i>CIF Indicator 13.2:</i> Greenhouse gas emissions. <i>GIF Target 13.2:</i> Integrate climate change measures into national policies, strategies and planning. <i>GIF Indicator 13.2.2:</i> Total greenhouse gas emissions per year.</p>

Target: The Government of Canada will transition to climate resilient operations by 2050 (All Ministers)

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Reduce risks posed by climate change to federal assets, services and operations.</p>	<p>The CSA will take action to reduce the risks identified in its climate risk and resiliency study by:</p> <ul style="list-style-type: none"> - Incorporating and/or strengthening the consideration of climate change in business continuity planning, departmental risk planning or equivalent processes, and program design and delivery considerations. - Incorporating the conclusion of CSA climate risks and resiliency study in its operational activities and other real property portfolio strategy planning. - Integrating future climate change conditions and adaptations into major real property projects to make sure that building projects and retrofits are climate resilient. <p>Program: Internal Services</p>	<p>Performance indicator: Percentage of critical assets for which action has been taken to reduce climate change impacts.</p> <p>Starting point: In 2022–23, action has been taken to reduce climate change impacts for 50% of critical assets.</p> <p>Target: By 2026-27, action will be taken to reduce climate change impacts for 100% of critical assets</p>	<p>Factoring climate variability and change into policy, programs, and operations is one of the important ways in which the government can adapt and be resilient to a changing climate. By assessing the risks of climate change impacts on critical assets, and developing plans to mitigate those risks, the CSA will reduce the risk of disruption of critical service delivery to Canadians.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 13.2:</i> Canadians are well-equipped and resilient to face the effects of climate change.</p> <p><i>GIF Target 13.1:</i> Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.</p> <p><i>GIF Target 13.2:</i> Integrate climate change measures into national policies, strategies and planning.</p> <p><i>GIF Indicator 13.2.1:</i> : Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change.</p>

IMPLEMENTATION STRATEGIES SUPPORTING THE GOAL

This section is for implementation strategies that support the goal “Take action on climate change and its impacts” but not a specific FSDS target

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Collaborate on emergency management and disaster risk reduction.</p>	<p>The CSA will continue to provide satellite data in response to the Charter activations.</p> <p>Program: Space Utilization</p>	<p>Performance indicator: Percentage of International Charter activations that have been supported with CSA images.</p> <p>Starting point: 84% of International Charter activation has been supported with CSA images in 2022–23.</p> <p>Target: 80% or above of the International Charter activations will be supported with CSA images annually.</p>	<p>The provision of CSA satellite images to disaster relief efforts is essential in responding to natural disasters around the world. This endeavour not only strengthens international relationships; it also contributes to emergency management and disaster risk reduction.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 13.2:</i> Canadians are well-equipped and resilient to face the effects of climate change. <i>CIF Indicator 13.2.1:</i> Frequency of selected natural disasters. <i>GIF Target 13.1:</i> Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. <i>GIF Indicator 13.1.1:</i> Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population.</p>

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Support climate change adaptation across Canada</p>	<p>Ensure the continuous delivery of Earth observation services to partners.</p> <p>Program: Space Utilization</p>	<p>Performance indicator: Number of Earth observation data services offered by the Space Utilization Program (SUP).</p> <p>Starting point: In 2022-23, 8 EO services were offered by the SUP</p> <p>Target: By 2026-27, 11 EO services will be offered by the SUP</p>	<p>Space-based data is an indispensable tool for learning about our planet and its complex dynamics. This data is the cornerstone on which government departments, industry, and academia rely for monitoring vulnerabilities, assessing natural disasters, and engineering cutting-edge solutions to withstand today's environmental challenges and those to come. By ensuring the continuous delivery of data from its Earth observation (EO) satellites to its national and international partners, the CSA contributes to the understanding of climate change, the assessment of its impacts, and the development of effective adaptation strategies to mitigate its effects.</p> <p>Relevant targets or ambitions: <i>CIF Ambition 13.2:</i> Canadians are well-equipped and resilient to face the effects of climate change. <i>GIF Target 13.2:</i> Integrate climate change measures into national policies, strategies and planning.</p>



GOAL 17 STRENGTHEN PARTNERSHIPS TO PROMOTE GLOBAL ACTION ON SUSTAINABLE DEVELOPMENT

FSDS CONTEXT

Satellites in space offer valuable information that can change people's lives for the better and inform Government decisions. Space-borne data enables innovators in the academic and business communities to find solutions to tangible challenges faced in day-to-day lives, such as wild forest fires, water scarcity, floods, and heat waves.

Canada's space community, with its Earth observation capability, currently collaborates with American, European and Japanese partners. When it comes to taking action to protect Canada's and the world's ecosystems, the CSA contributes to this by sharing space-borne data nationally and internationally and by financially supporting the development of applications. The CSA's **RADARSAT satellites**, for example, monitor ecosystems and ice, facilitate marine surveillance, and assist in disaster management, resource management, and mapping around the world. Making this data accessible provides all partners with key information to monitor environmental conditions and inform decision-making. Another example is the **SCISAT** satellite, which collects atmospheric data to monitor Canada's air quality, ozone recovery, and the Earth's climate in line with Canada's engagement to the United Nations' Montreal Protocol and the Paris Agreement. Other satellites also monitor different parts of the world's ecosystems, atmosphere, and oceans.

Additionally, the CSA has actively improved the availability of scientific data and publications as part of the Open Government initiative. The CSA provides access to scientific data in atmospheric science, earth surface science, solar-terrestrial science, astronomy, planetary exploration, space health and space technologies. Greater access to space-borne data will result in more value-added applications and services for Canadians, developed by all actors of the space sector, while strengthening international partnerships.

⁵ For a list of Earth observation satellites, please visit:

[Earth observation satellites | Canadian Space Agency \(asc-csa.gc.ca\)](https://asc-csa.gc.ca)



IMPLEMENTATION STRATEGIES SUPPORTING THE GOAL

This section is for implementation strategies that support the goal “Strengthen partnerships to promote global action on sustainable development” but not a specific FSDS target

IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Work with partners to monitor and protect our ecosystems through space-based services and technologies.</p>	<p>The CSA will continue to provide space-based data to other governmental departments (OGDs) and the private sector and support the development of data processing applications to monitor and protect the environment.</p> <p>Program: Space Utilization</p>	<p>Performance indicator: Number of services to Canadians offered by OGD and the private sector dependent on space data.</p> <p>Starting point: 49 services offered by OGDs and the private sector are dependent on space data in 2022-23.</p> <p>Target: 60 services to be offered by OGDs and the private sector are dependent on space data by 2026-27.</p>	<p>Fostering partnerships with national and international partners is essential to the success of climate change actions. By supporting government departments and the private sector in providing services dependent on space-based data to Canadians, the CSA is contributing to the development of services and applications that have the capacity to protect and monitor our ecosystems.</p> <p>Relevant targets or ambitions: <i>CIF Ambition:</i> Canada fosters collaboration and partnerships to advance the SDGs.</p>



IMPLEMENTATION STRATEGY	DEPARTMENTAL ACTION	PERFORMANCE INDICATOR STARTING POINT TARGET	DEPARTMENTAL ACTION CONTRIBUTION TO THE FSDS GOAL / TARGET - CANADA'S 2030 AGENDA NATIONAL STRATEGY / SDGS
<p>Advance open data initiatives.</p>	<p>The CSA will continue its efforts to strengthen partnerships by making space-based data available to its partners and the public.</p> <p>Program: Space Utilization</p> <p>Space Exploration</p> <p>Space Capacity Development</p> <p>Internal Services</p>	<p>Performance indicator: Number of datasets made available through CSA support.</p> <p>Starting point: 35 datasets in 2018.</p> <p>Target: 53 datasets will be made available through CSA support by 2026-27.</p>	<p>By continuing to make space data available to partners and the public, the CSA is promoting collaborative sustainable development. Through the Open Government initiative, the CSA has made data more accessible and has encouraged information sharing between partners. The information collected by CSA satellites and projects is useful in establishing sustainable development targets and evaluating the impacts of climate change; CSA data is therefore paramount in advancing the sustainable development goals.</p> <p>Relevant targets or ambitions: <i>CIF Ambition:</i> Canada fosters collaboration and partnerships to advance the SDGs.</p> <p><i>CIF Indicator:</i> Number of open datasets published by the Government of Canada.</p>

SECTION 5

Integrating Sustainable Development

The CSA has committed to a series of internal initiatives that seek to further sustainable development into its internal processes. First, the CSA has taken steps to ensure that its decision-making processes take the objectives and targets of the FSDS into account. The CSA plans to intensify its efforts to integrate sustainable development into its internal management practices and policies, real property operations, as well as in its procurement through activities that support the Greening Government Strategy, the FSDS's goals and targets, Canada's 2030 Agenda, and the SDGs.

Furthermore, the CSA has planned to add sustainable development requirements, such as the Greening Government Strategy's objectives and Strategic Environmental Assessment (SEA) processes, into its Investment Governance Management Framework. This will ensure that sustainable development takes precedence and is duly considered throughout the planning and implementation phases of projects.

The longevity of our space assets is also at the core of the CSA's priority. For example, launched in 2003, SCISAT was supposed to deliver data for two years. In 2023, SCISAT still provides scientists all over the world with crucial information on the chemical composition of the atmosphere. Mission extensions are not only good for return on investment, they are also contributing to maintain a sustainable space environment.

The CSA has also planned to integrate resilient and net-zero objectives into its operations management. As part of this initiative, the CSA plans to align its goal of carbon neutrality with its real property strategy, transition to greener procurement, integrate climate resiliency and adaptation into project management, and encouragement of low-carbon mobility (carpooling, public transit, bicycle). In parallel, the CSA will continue to integrate sustainable development through its participation in all Greening Government committees and communities of practice at the national level.

Moreover, the CSA has drafted a green procurement directive, which will act as a significant step towards formalizing its commitment to green procurement obligations. This directive will not only solidify the CSA's dedication to environmentally responsible practices but will also ensure the reduction of environmental impacts from its procurement activities. The CSA will continue to make sure that all procurement and materiel management specialists are properly trained (e.g., the Canada School of Public Service course on green procurement or equivalent) within one year of being hired. The CSA will also complete a life cycle assessment (LCA) on a space project to deepen our understanding of environmental impacts and carbon reduction opportunities for Research & Development service contracts; these assessments will allow the CSA to identify solutions for decarbonizing these contracts.

The CSA has also dedicated itself to ensuring that sustainable development is reflected within the organization's communications and outreach. In this regard, the CSA proactively shares environmental performance updates with its employees through a quarterly newsletter and organizes activities during special occasions, such as the Canadian Environmental Week. In the past, such initiatives have involved a micro forest plantation activity, bicycle repair workshops, and electric vehicles conferences. In the coming years, the CSA plans to start a green committee to solidify the CSA's collective commitment to sustainability.

The 2023–27 DSDS cycle presents an opportunity for the CSA to refine its organizational vision and mission. The CSA is aiming to foster a workplace where sustainability is deeply embedded in the organizational culture to pave the way towards a greener future. The CSA is also looking forward to embracing this change and to contributing to protecting the Earth and its citizens' quality of life. With this mindset, the CSA is looking towards participating in the international efforts on space sustainability and the limitations of space debris.

Lastly, the CSA will continue to ensure that its decision-making process includes consideration of FSDS's goals and targets through its Strategic Environmental Assessment (SEA) process. A SEA for a policy, plan or program proposal entails an analysis of the impacts of the given proposal on the environment, including on relevant FSDS goals and targets.

The CSA's process includes, as a first step, undertaking the SEAs with a preliminary scan as early as possible in the proposal's development cycle; this scan will identify possible environmental effects and determine whether the proposal requires a full-SEA review. Early assessment protocols will also assist the CSA in identifying alternatives and recommendations in cases where environmental effects are important.

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's goals and targets, of the approved policy, plan or program have been considered during proposal development and decision-making.

