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DEPARTMENT OF NATIONAL DEFENCE AND CANADIAN ARMED FORCES

2020-21

DEPARTMENTAL RESULTS REPORT



The Honourable Anita Anand, PC, MP
Minister of National Defence

Canada

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From the Minister

As Minister of National Defence, it is my privilege to present the 2020-21 Departmental Results Report for the Department of National Defence and the Canadian Armed Forces (CAF). The fiscal year was marked by the COVID-19 pandemic – and its impact on Defence plans – but also by continuity, as Defence contributed to the national response to the pandemic while continuing to deliver on CAF operations, essential defence programs and activities, and the initiatives in Canada’s defence policy, *Strong, Secure, Engaged*.

Throughout the pandemic, Defence has made the health and safety of Canadians, including members of the Defence Team, our priority. During 2020-21, the CAF contributed to the national response to COVID-19 by deploying to long-term care facilities, providing direct support to northern and remote communities, and supporting the Public Health Agency of Canada and federal, provincial and territorial authorities with planning and coordination for the distribution of vaccines. The CAF also retrieved and housed repatriated Canadians from travel abroad at Canadian Forces Base

Trenton, and contributed to the international response to the pandemic, transporting COVID-19 related humanitarian and medical supplies at the request of the United Nations.

Defence procurement continued to become more streamlined and flexible to support operations, and major capital projects helped position Canada for a strong economic recovery from COVID-19. Despite the pandemic, shipyard work continued on the third and fourth Arctic Offshore Patrol Ships and the first Joint Support Ship. Deliveries of all equipment for the new fleet of medium capacity logistics trucks were completed. Modernized airborne intelligence, surveillance, and reconnaissance aircraft were delivered, with more undergoing modifications. Millions of dollars were invested in repairs and upgrades to Reserve Force armouries and training facilities across Canada. And this report outlines milestones for many more equipment, information technology, infrastructure, energy efficiency and environmental management projects.

Defence innovation and business transformation progressed, with Canada’s closest allies, our federal partners, Canadian innovators and industry engaged in developing solutions that will be applied to equip the CAF with leading-edge capabilities, as well as generate jobs and improve Canada’s capacity for innovation.

Defence continues to improve and strengthen relationships with Indigenous communities and leaders across Canada in compliance with our obligations and in the spirit of reconciliation. In 2020-21, this included consultations with Indigenous People on the safety, security and defence objectives of the Arctic and Northern Policy Framework and on proposed northern development projects, partnering for employment and economic opportunities, and advancing claims resolution.

Toward the end of the reporting year, Canadians heard more from members of the Defence Team who have been affected by sexual trauma and sexual misconduct. Important steps to address this and other forms of misconduct were taken during the year, including the release of *The Path to Dignity and Respect: The CAF Sexual Misconduct Strategy*, and initial work to establish a new Level 1 Defence organization: Chief Professional Conduct and Culture.

But these steps were only a beginning. As a national institution, we must accept responsibility for the devastating impact of these transgressions on lives and careers. We must prevent such incidents from occurring in the first place, and work to ensure that the conduct of everyone who is part of this institution lives up to our professed values of integrity and accountability, diversity, equity and inclusion.

As you will see in reading this report, we can have tremendous confidence in the members of the CAF and Defence public servants to rise to all challenges in their work, as they did in 2020-21 — conducting operations, equipping, readying and sustaining our Forces, innovating new defence capabilities, and protecting Canadians, our allies and international partners from threats now, and for the future.

The Honourable Anita Anand, PC, MP
Minister of National Defence

Results at a glance

Results at a glance

In 2020-21, the Department of National Defence (DND) and the Canadian Armed Forces (CAF) carried out their mandate to achieve results related to six Core Responsibilities:

- Operations
- Ready Forces
- Defence Team
- Future Force Design
- Procurement of Capabilities
- Sustainable Bases, Information Technology Systems and Infrastructure

More information on the Core Responsibilities can be seen in the [Supporting information on the Program Inventory](#) section of this report.

Canada's vision for Defence – Strong at home, Secure in North America, Engaged in the world

The department continues to implement [Strong, Secure, Engaged: Canada's Defence Policy](#)ⁱ (SSE). The department has strengthened its internal management processes to support [111 initiatives outlined in SSE](#)[#]. In addition, business analytics tools were improved to enable better oversight and further support the implementation of the SSE initiatives. These initiatives support both the strategic and the day-to-day management of the defence program across DND and the CAF.

Anticipate, Adapt, Act

The CAF's core missions are: detecting, deterring and defending against threats to Canada and North America; providing assistance to civil authorities/law enforcement in support of national security; assisting and in some cases leading forces for the North Atlantic Treaty Organization (NATO), coalition and United Nations peace operations; contributing to global stability and security, as well as engaging in capacity building; responding to domestic and international disasters; and conducting search and rescue operations. Except where specifically noted, operations continued to be conducted despite COVID-19 challenges.

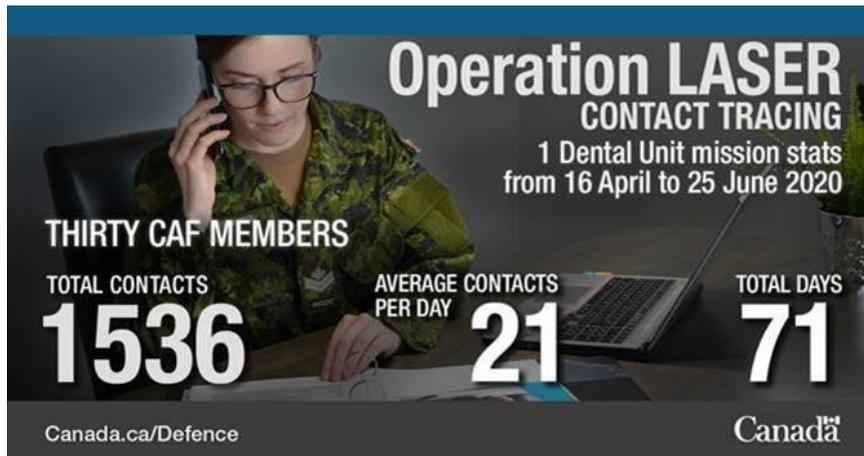
Anticipating emerging threats and challenges is fundamental to maintaining Canada's security. Despite the challenges of the COVID-19 pandemic, the Defence Team continued to provide timely information and intelligence to decision-makers, assisting the Government of Canada in promptly identifying and understanding emerging trends and crisis, and supporting the decision-making process to address these security concerns.

Some key operations of FY 2020-21 included:

Strong at Home

- [Operation VECTOR](#)ⁱⁱⁱ: Supported Federal, Provincial, and Territorial governments with the distribution of COVID-19 vaccines. CAF also fulfilled several Requests for Assistance, deploying just under 400 CAF members, including a team seconded to support the Public Health Agency of Canada (PHAC) with ongoing planning and coordination for the transport, storage, and distribution of vaccines. In addition, CAF supported Global Affairs Canada in the distribution and administration of vaccines outside of Canada, utilizing existing deployed operations as vaccination hubs.
- [Operation LASER](#)^{iv}: In response to the COVID-19 pandemic, CAF supported several Requests for Assistance and provided support to northern, remote and isolated communities with Canadian Rangers, medical teams and general duty troops. Tasks included delivery of essentials, real-life support such as transportation and infrastructure, primary patient care, wellness checks as well as

set-up of alternate isolation accommodations. Additionally, CAF provided real-life support at 16 Land Points of Entry in support of the PHAC.



- **Operation LIMPID^v**: Conducted, with different partners, year-round surveillance and presence operations of Canada's territories and approaches in order to improve all domain situational awareness of the maritime, air, terrestrial, space and cyber domains.
- **Operation NANOOK^{vi}**: Conducted operational training activities that enhanced collaboration with other government departments, agencies and regional mission partners to increase interoperability, readiness and presence in the North.
- **Search and Rescue^{vii}**: Continued to provide aeronautical Search and Rescue, coordinated the aeronautical and maritime Search and Rescue system, and assisted with ground Search and Rescue efforts with the support of Canadian Rangers and Primary Reserve Force members.

Secure in North America

- **Operation NOBLE EAGLE**: Throughout FY 2020-21, North American Aerospace Defense Command (NORAD) supported Canadian and United States government departments, agencies, and partners to defend the air space of Canada and the United States from airborne threats. In collaboration with DND allies and civilian partners, including the Royal Canadian Mounted Police (RCMP) and Transport Canada, CAF remained prepared to respond to all forms of aerial threats to Canada and the United States.
- **NORAD^{viii}**: Executed aerospace and maritime warning and aerospace control activities to protect and respond against threats to Canada and the United States, through NORAD Agreement.

Engaged in the World

- **Operation CARIBBE^{ix}**: A CP-140 Aurora aircraft and four of Her Majesty's Canadian Ships (HMCS) were deployed to participate in United States-led enhanced counter narcotics operations in the Caribbean and Central America. Deployed CAF assets intercepted a total of 4 165 kilograms of illicit drugs, valued at approximately \$90.4M United States Dollars.
- **Operation IMPACT^x**: Trained, advised and assisted Iraqi security forces to prevent the resurgence of Daesh and continued to progress the professionalization of Iraqi military institutions into sustainable and enduring defence institutions. In addition, contributed to a whole-of-government approach to security, stabilization, humanitarian and development assistance in response to the crises in Iraq and Syria and their impact on Jordan and Lebanon.
- **Operation NEON^{xi}**: Contributed to the multinational efforts to enforce United Nations Security Council Resolution (UNSCR) 2397 sanctions^{xii} against the Democratic People's Republic of Korea. Evidence collected by CAF assets supported Global Affairs Canada-led diplomatic efforts to tackle UNSCR sanctions-evasion activity.

- **Operation PRESENCE**^{xiii}: Flew 28 sorties into Entebbe, Uganda to assist with transporting troops, equipment and supplies to the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO) and the United Nations Mission in South Sudan (UNMISS). Due to COVID-19, the size and scope of the deployed force was limited. CAF also contributed a five-person Task Force to the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) Headquarters in Bamako and assigned two CAF personnel to support the United Kingdom Long Range Reconnaissance Group based in Gao, Democratic Republic of the Congo.
- **Operation REASSURANCE**^{xiv}: Continued Canada's contribution to NATO's enhanced Forward Presence (eFP) Battle Group in Adazi, Latvia as the Framework Nation. In January 2021, CAF assumed command of the Standing NATO Maritime Group One along with the Flag Ship HMCS *Halifax*. The CAF conducted 291 CF-18 sorties as part of Canada's contribution to NATO Air Policing: Air Task Force - Romania.

Operation REASSURANCE

Canadian Armed Forces soldiers with enhanced Forward Presence Battle Group – Latvia fire a Carl Gustaf 84mm rocket launcher on training during Operation REASSURANCE at Camp Adazi, Latvia.



(Photo credit: Master Corporal Stuart MacNeil)

- **Operation UNIFIER**^{xv}: Provided training to 758 members of the National Guard of Ukraine and 5 681 members of the Armed Forces of Ukraine through 90 course serials. Since the start of the mission in September 2015, CAF has trained more than 24 535 Security Forces of Ukraine candidates via 510 course serials spanning all domains of activity.
- **Operation PROJECTION**^{xvi}: Conducted Exercise KEEN SWORD with Japan and the United States. This biennial exercise included anti-submarine warfare serials, as well as an opportunity to train and improve interoperability with allied navies in the execution maritime operations.
- **Operation GLOBE**^{xvii}: Repatriated 870 Canadians from Asia and six Canadians from the embassy staff in Ukraine at the outbreak of the COVID-19 pandemic; and, delivered over 82 500 kg of medical supplies to seven countries in Central America.

More information on current Operations can be found here: [Current military operations](#)^{xviii}.

Well-supported, diverse, resilient people and families

While COVID-19 impacted many activities across the department, Gender-based analysis plus (GBA Plus) was key to the development of equitable business continuity and business resumption plans, and in the planning and execution of the CAF domestic operations in support of Canadians.

During FY 2020-21, the Defence Team:

- Continued to offer Integrated Conflict and Complaint Management services, providing a one-stop-shop to access timely information, support and guidance in navigating the sometimes complex conflict and complaint mechanisms. Through the use of an integrated database, this service enables trend analysis and strategic visibility on conflicts and complaints; information that directly supports the advancement of policies and processes. The Defence Team continues to review and assess the harassment complaint procedures to ensure that the department is aligned with the requirements of [Bill C-65](#)^{xix};
- Progressed work to revamp and rebrand the 2016 CAF Diversity Strategy as the CAF Inclusivity Framework;
- Created an Advisory Panel in December 2020 as part of its efforts to support Indigenous, Black and People of Colour along with the Lesbian, Gay, Bisexual, Transgender, Queer, Two-Spirit (LGBTQ2+) community and women at National Defence;
- Received input from multiple groups in the continued development of the evidence-based CAF Employment Equity Plan 2021-2026. It forms a commitment aimed at eliminating employment barriers for military members who are women, Indigenous Peoples, visible minorities, persons with disabilities, and those belonging to the LGBTQ2 Plus communities;
- COVID-19 led to the modernization of many recruiting processes, moving into the virtual domain. Face-to-face events such as the Royal Canadian Navy (RCN)'s Operation KAIROS PASSANT were not possible, but the Canadian Forces Recruiting Group hosted 281 virtual job fairs and information sessions on social media platforms; and
- The fourth iteration of the Seamless Canada meeting took place in December 2020. Provincial and Territorial partners discussed their support for enhanced family assistance related to health care, spousal employment, and education mobility for secondary students.

Sexual Misconduct Response Centre (SMRC)

The SMRC is a recognized centre of expertise that provides support services or facilitates with access to support services for CAF members who have experienced or been affected by sexual misconduct. The SMRC is a civilian entity that operates outside of the CAF Chain of Command.

SMRC counsellors provide 24/7 confidential, bilingual support and information on options available to callers. Upon request, they facilitate referrals to other CAF organizations or civilian services.

In FY 2020-21, the SMRC undertook the following key activities:

- Implementing two schedules of the Final Settlement Agreement of [CAF-DND Sexual Misconduct Class Action Settlement](#)^{xx}: *Schedule "K" - Restorative Engagement* and *Schedule "N" - Survivor Support Consultations*:
 - *Schedule "K" - Restorative Engagement*: Completed the initial framework. Virtual consultations with various stakeholders, including affected persons, defence representatives, Defence Advisory Groups and subject-matter experts began in October 2020 and will be ongoing throughout the various implementation phases; and
 - *Schedule "N" - Survivor Support Consultations*: A consultation group comprised of class members and Departmental representatives was struck, with the addition of external subject matter experts contracted in July 2020. Its mandate is to provide recommendations to enhance survivor support.
- Developed four initiatives for inclusion in the National Action Plan on Gender-Based Violence led by Women and Gender Equality Canada. These initiatives were subsequently included in Budget 2021. These consisted of:

- Enhancing internal support services to victims, including access to free, independent legal advice;
- Expanding an existing contribution program to support community-based sexual assault service providers outside major urban military centres;
- Piloting online and in-person peer support groups for CAF members and veterans who experienced sexual misconduct during their service; and
- Conducting research to inform targeted training and response frameworks, and engage external experts to support education and training to prevent sexual violence.
- Consulted with the Defence Team on the development of key policies such as *The Path to Dignity and Respect: The CAF Sexual Misconduct Response Strategy*^{xxi} and DAOD 9005-1, *Sexual Misconduct Response*^{xxii}. The SMRC provided stakeholder input to the Judge Advocate General team working on implementing regulations, processes, and communications related to Bill C-77;
- Provided a submission on aspects of the military justice system as part of the 3rd Independent Review Authority commissioned to review military justice;
- Continued reviewing and analyzing survivor strategies from other national and international jurisdictions to identify key elements, promising practices, and key research findings;
- Provided virtual Trauma-Informed Care training to other parts of DND and the CAF despite the COVID-19 pandemic. This included elements of the Canadian Forces Health Services and chaplains; and
- Led the initial phase of the development of an Immersive Learning Platform which continues to be developed. The Immersive Learning Platform will provide learners with an interactive experience to participate in conversations with a variety of individuals in different situations, prompting the learner to intervene in order to prevent sexual misconduct and support victims.

In FY 2020-21, the Defence Team undertook the following key activities in relation to sexual misconduct:

- Prepared for significant organizational changes intended to overcome internal barriers for effective sexual misconduct prevention and response. This work set the foundation for a new organization: *Chief, Professional Conduct and Culture*^{xxiii}. Its mandate will encompass activities across a broad range of misconduct including sexual misconduct, hateful conduct, harassment and discrimination; and
- Released *The Path to Dignity and Respect: The CAF Sexual Misconduct Response Strategy*^{xxiv} (referred to as *The Path*) in October 2020. *The Path* is a comprehensive culture change strategy informed by research and evidence, which has been reviewed both internally and externally, and that utilizes best practice culture change models adapted for the CAF. It includes a renewed focus on improving reporting processes, incident response and investigation. A formal review was initiated to seek feedback from stakeholders and subject matter experts. In November 2020, *Defence Administrative Orders and Directive (DAOD) 9005-1 Sexual Misconduct*^{xxv} was released, establishing a unified policy towards sexual misconduct within the CAF.

Defence Procurement

The implementation of SSE continued to streamline defence procurement, thus improving timely acquisition of much needed military capabilities. This continued robust defence procurement will contribute to Canada's plan for a strong economic recovery from the repercussions of the COVID-19 pandemic.

To mitigate risks imposed by the pandemic, the department leveraged the increase in Emergency Contracting Authority to \$10M as granted by the President of the Treasury Board in April 2020. This allowed the department to move procurement more quickly and with fewer approval levels in order to support Operation LASER and Operation LENTUS.

In addition, investments by the department were leveraged to better enable remote work and to maintain strong communication with stakeholders in and outside of government, including industry, while preserving the health and safety of our workforce. One example is the adoption of encrypted signatures.

Meanwhile, the Materiel Group Transformation Campaign Plan improved delivery of the Materiel Program, invested in the Materiel Group Team through training and staffing, and strengthened stewardship of resources through a series of strategic initiatives.

Key major equipment projects, as outlined in SSE, for FY 2020-21 included:

- The [Canadian Surface Combatant^{xxvi}](#): The remaining work to complete the Requirements Reconciliation of the Canadian Surface Combatant project continued with final administrative action under way to complete this work in FY 2021-22. A joint (DND/ Public Services Procurement Canada (PSPC)) corporate submission attained the necessary authorities to progress the design in support of the start of construction in FY 2023-24, to design and build a Land Based Test Facility, and to procure necessary Long Lead Items equipment in preparation for the start of construction. Throughout FY 2020-21, the project progressed the Preliminary Design phase with completion targeted for mid-2022;
- [Arctic and Offshore Patrol Ships^{xxvii}](#): Construction continued on the second Arctic and Offshore Patrol Ship, the future HMCS *Margaret Brooke*, although progress was impacted by the implementation of necessary COVID-19 pandemic safety protocols. Based on the current schedule, the future HMCS *Margaret Brooke* will be delivered in July 2021. During FY 2020-21, work continued on the third Arctic and Offshore Patrol Ship, the future HMCS *Max Bernays*, and commenced on the fourth ship, the future HMCS *William Hall*;
- [Fixed Wing Search and Rescue Aircraft Replacement Project^{xxviii}](#): Despite continuing challenges associated with international travel, the Fixed Wing Search and Rescue Aircraft Replacement Project accepted an additional four aircraft in Spain, bringing the total number of aircraft accepted by Canada to five. The first aircraft, originally accepted in December 2019, was delivered to Canada from Spain in September 2020. Six of the seven training devices were accepted, followed by the commencement of the aircrew and maintainer training within the newly constructed CC-295 Training Centre in Comox, British Columbia. Minor construction on the training centre continues with completion expected in fall 2021;
- [Joint Support Ship^{xxix}](#): The Joint Support Ship project received Implementation authorities in February 2020. Supporting contracts were amended to continue activities until the Build contract was awarded in June 2020. Shipyard activities were marginally impacted by COVID-19, with production continuing throughout the pandemic. By the end of FY 2020-21, 111 out of 123 blocks were under construction for the first Joint Support Ship, the future HMCS *Protecteur*;
- [Future Fighter Capability Project^{xxx}](#): In May 2020, the Future Fighter Capability Project sought the design and construction of a new fighter jet facility at 4 Wing Cold Lake, Alberta. This facility will host three fighter squadrons and include space for daily operations, maintenance, and training. In June 2020, Canada also sought the design and construction of a new fighter jet facility at 3 Wing Bagotville, Quebec. This facility will host two squadrons and will include space for daily operations, maintenance and training. In July 2020, Canada received bids from three suppliers that are currently eligible to participate in the future fighter competitive procurement process. Proposals are being rigorously assessed in terms of capability, cost, and economic benefits. The evaluation also includes an assessment of bidders' impact on Canada's economic interests. In August 2020, a \$9.2M design contract for a Fighter Squadron Facility in Cold Lake, Alberta was awarded, and a similar \$12.1M contract was awarded in September 2020, for a Fighter Squadron Facility in Bagotville, Quebec. These contracts made it possible to begin design and site preparation work for infrastructure that is not aircraft specific;
- [Remotely Piloted Aircraft System^{xxxi}](#): Throughout FY 2020-21, the project team for the Remotely Piloted Aircraft System engaged the two Qualified Suppliers through the Review and Refine Requirements process in order to develop the draft Request for Proposal. The initial draft Request for Proposal was issued to Qualified Suppliers for review and comment in November 2020.

Feedback received has been included in addition to other refinements in preparation for formal issuance of the Request for Proposal in FY 2021-22;

- **Medium Support Vehicle Systems^{xxxii}**: Deliveries of all equipment to units across Canada for the Medium Support Vehicle Systems project were completed. A five-year in-service support contract extension was awarded in July 2020. Fleet management responsibilities were transferred from the project to the support organization in summer 2020. Full Operational Capability was reached in February 2021;
- **Logistics Vehicle Modernization^{xxxiii}**: The Logistics Vehicle Modernization project released a draft Request for Proposal in phases to six qualified suppliers. Engagements with Qualified Suppliers were held at each major release to solicit feedback. The project anticipates releasing the final Request for Proposal in FY 2021-22;
- **Armoured Combat Support Vehicles^{xxxiv}**: In December 2020, the first Armoured Combat Support Vehicle, a Troop Cargo Vehicle variant, was produced and accepted. Qualification testing on the first variant commenced in early 2021. Design and production of the second and third variants, Ambulance and Command Post, significantly progressed in FY 2020-21;
- **CP-140 Aurora Incremental Modernization Project^{xxxv}**: The CP-140 Aurora Incremental Modernization Project Blocks I, II and III have been completed and have provided a modernized CP-140 Intelligence, Surveillance and Reconnaissance and Anti-Submarine Warfare capability to the CAF. Block IV has provided three modified aircraft (one of which has a fully capable Self Defence system), with three more aircraft currently undergoing modification; and
- **CH-149 Cormorant Mid-Life Upgrade Project^{xxxvi}**: The CH-149 Cormorant Mid-Life Upgrade Project received a mid-May 2020 contractor proposal, which proved unaffordable. The project began investigating alternate solutions, delaying the target implementation date. The CH-149 fleet averaged 99.5 percent Search and Rescue availability at each base during FY 2020-21 and supported aircrew training.

For more information on key equipment projects, please visit the Department of National Defence and the Canadian Armed Forces' [Current Projects^{xxxvii}](#) webpage.

The Defence Supply Chain

The Defence Supply Chain had notable successes in FY 2020-21. With the goal of streamlining inventory management, four of the six objectives in the 2016 Inventory Management Action Plan were met with the remaining two nearing completion. The Distribution and Materiel Inventory Network Optimization project, working to optimize the CAF's domestic ground distribution network, completed phases 1 and 2. The approved National Disposal Initiative also continued its focused disposal efforts, which will contribute to the reduction of approximately 30 000 NATO Stock Numbers with a potential value of up to \$230M, resulting in more than 14 000 m³ of additional space. Furthermore, a Defence Supply Chain Integrated Business Requirements Plan was developed which, for the first time, presented a vision for business-led systems transformation pan-DND and throughout the CAF Defence Supply Chain.

The CAF's activities in support of Operation LASER and Operation LENTUS provided an opportunity to develop data reports to meet critical information requirements related to materiel - specifically to determine how long current inventory holdings could support normal usage, and what the impact would be if usage was increased. These reports provided key information to make tactical and operational level evidenced-based decision-making possible. DND also used the Defence Supply Chain governance to communicate and oversee the use of the regular authorities and special Emergency Contracting Authorities in response to the COVID-19 pandemic.

The Defence Team assisted the Federal Government, specifically the PHAC, in providing logistics planning and execution under Operation VECTOR. DND also supported the PHAC with warehousing and distribution of vaccines as well as purchasing and warehousing of personal protective equipment. The department provided support to procure specialized freezers for distribution across the various CAF clinics and hospitals that will be involved in administering COVID-19 vaccines to CAF members.

National Defence continued to work with Innovation, Science and Economic Development and PSPC to provide economic benefits for Canada and Canadians. In addition, the department awarded in excess of 500 contracts, valued at over \$20M, to Indigenous businesses in FY 2020-21.

Defence Infrastructure and Environment

DND and the CAF require modern, functional, and sustainable infrastructure in which to work and train. As DND and the CAF have the largest infrastructure portfolio in the federal government, greener, more sustainable infrastructure is key to achieving our climate goals. We are modernizing our defence infrastructure to improve efficiency, reduce greenhouse gas emissions, and support our personnel. In FY 2020-21, DND and the CAF:

- Invested \$338M in the design and construction of new infrastructure facilities across the CAF including construction of a new B Jetty in Esquimalt, British Columbia, a new headquarters for the Royal Canadian Dragoons Armoured Regiment in Petawawa, Ontario and a new Canadian Forces Health Services Centre in Gagetown, New Brunswick;
- Invested approximately \$46M in 241 active projects to improve Primary Reserve Force infrastructure and accommodate future growth in the Reserve Force, as well as new capabilities and equipment to support the evolving needs of a modern Reserve Force. Projects included upgrading ranges and boathouses, Tactical Armoured Patrol Vehicle (TAPV) shelters and garage extensions, and more;
- Advanced 20 of 41 divestment projects and demolished over 70 obsolete buildings that were no longer required to support military operations. The resources used to maintain these properties will be reinvested in modernizing our portfolio and building new facilities to support personnel and their work;
- Continued to improve our infrastructure portfolio management with investment oversight and life-cycle costing via the adoption of an Investment Management Board to ensure that funding effectively supports DND's mandate and our personnel well into the future; and
- Refreshed the [Defence Energy and Environment Strategy \(2020-2023\)](#)^{xxxviii} which provides the department with renewed direction to evolve as an environmentally sustainable organization, better manage our energy use and minimize our environmental footprint across a broad spectrum of activities. The strategy includes 16 measurable targets focusing on energy efficiency, climate change adaptation, sustainable real property and green procurement.

Defence Innovation and Business Transformation

In FY 2020-21, DND and the CAF upgraded capabilities and structure to better drive evidence-based decision-making. The department established a Data Governance Working Group. Data Stewards will represent their respective lines of business, and testing of the Data Governance Framework has begun. The Data Quality Framework is in the final stages of development.

The recently established Defence Resource Business Modernization program currently oversees one major capital project and five enterprise modernization initiatives. It is also developing an input process for future initiatives. The flagship project, Defence Resource Management Information System (DRMIS) modernization, has progressed through significant phases of project development.

Science, Technology and Innovation play a vital role in Canada's defence and security by ensuring that members of the CAF are equipped with leading-edge capabilities to address defence and security challenges, both at home and abroad. In FY 2020-21, the Defence Team:

- Provided expertise and science and technology advice on surveillance, intelligence, cyber tools for defence, space-related capabilities and threats, energy alternatives, remotely piloted systems, data analytics and counter-improvised explosive device solutions;
- Advanced the government's [Beyond2020](#)^{xxxix} initiative, supporting a workforce that is agile, equipped and inclusive while fostering business innovation through its Defence Innovation Exchange;

- Engaged in the newly created Five Eyes Research and Development Council, which serves to integrate science and research in order to address security challenges shared between the five countries of the Five Eyes alliance, which includes Canada, the United States, Australia, New Zealand and the United Kingdom. The forum provided guidance in areas such as Counter Violent Extremism and the fight against COVID-19;
- Concluded a project with the Government Operations Centre focused on an examination of incident command structures in Emergency Operations Centres across the country. DND and key departments are in the planning stages to establish how Defence Research and Development Canada could contribute to a National Priority Exercise called Coastal Response around a major earthquake scenario;
- Strengthened the PEGASUS program with the alignment of Canadian Information Management/Information Technology plans, projects and priorities. This program delivers upgraded Computer Information System interoperability between Five Eyes national secret networks. In FY 2020-21, a preliminary capability for web browsing, combined with a global proficiency testing environment and the delivery of a reliable and robust network solution between DND and United States Department of Defense, was initiated;
- Supported the successful rollout of Defence 365, the DND version of Microsoft Office 365, to enable all personnel to work virtually and connect with their teams over the Internet. Additionally a number of program elements have been put in place in combination with cloud subscriptions which have been configured with a security foundation;
- Launched all of the [Innovation for Defence Excellence and Security](#)^{xl} (IDEaS) program tools. These are now delivering capabilities to DND and the CAF, including the first test drive occurring for a solution developed under the Competitive Projects element of IDEaS. The contract was signed in 2020, and following training will see the testing conducted in FY 2021-22. Since 2018, IDEaS has issued 58 challenges and funded more than 440 projects, committing and spending over \$161.2M. IDEaS Call for Proposal 4 closed in December 2020 with a total of 280 applications for seven challenges. Evaluations are currently under way with awards anticipated in FY 2021-22;
- Awarded three contracts under Call for Proposal 3 in February 2021 bringing the total number of contracts awarded to 89, valued at \$19.7M. Call for Proposal 2 has awarded 16 contracts, valued at \$17.9M. The IDEaS program has reached out to more than 5 000 innovators;
- Worked with Health Canada, the PHAC and the National Research Council to identify and directly fund research projects to improve COVID-19 testing methods, with a total value of \$2.34M, as part of the Government of Canada's larger Pandemic Response Challenge. These contribution agreements resulted in the development of the first Canadian-made testing kit to detect the presence of COVID-19 antibodies and a point-of-care diagnostic test for the virus that causes COVID-19;
- Defended embedded vehicle systems from cyber-attack and support material assurance. Defence completed a multi-year effort to demonstrate automated defence of DND networks and tools to defend and increase information assurance with networked devices at tactical edge; and
- Introduced a new line of effort aimed at developing/demonstrating capability to detect and attribute external disinformation campaigns and assess the veracity of open source information primarily distributed through social media.

Defence Relationship with Indigenous Peoples

The Defence Team continues to renew and strengthen our relationships with Indigenous Peoples across Canada. As part of the Government of Canada's commitment to truth and reconciliation, DND and the CAF continue to uphold our obligations (e.g. Aboriginal and treaty rights, legal duty to consult, contracting, etc.) reflected in statutes, negotiated agreements and treaties, and court decisions. In addition, we continue to review our policies and operations to align with the objectives of Indigenous reconciliation. Highlights of the activities undertaken during FY 2020-21 include:

- Leveraged the cultural understanding, perspectives and experiences of our Defence Aboriginal Advisory Group members, drawing on their relationships and links with local communities across the country;
- Engaged with local and regional Indigenous groups in northern Canada to implement the Safety, Security and Defence Chapter of the Arctic and Northern Policy Framework. Collaboration and engagement on proposed northern development projects ensures that treaty rights and interests of Indigenous groups are respected while facilitating DND and CAF initiatives such as NORAD modernization and continental defence;
- Maintained several CAF entry programs, developed through a special relationship with Indigenous leaders and communities, in order to provide a blend of military and cultural education;
- Co-developed a civilian Indigenous recruitment strategy in cooperation with members of Indigenous communities;
- Provided economic opportunities for Indigenous groups in northern Canada by increasing federal procurement opportunities through the Procurement Strategy for Aboriginal Businesses and Indigenous Benefits Plans;
- Expanded and deepened existing relationships with Indigenous groups through the work of the Canadian Rangers, Junior Canadian Rangers, Operation NANOOK, Real Property Operations North, and Joint Task Force North;
- Consulted and engaged with local and regional Indigenous groups and treaty members to advance initiatives of interest to all parties. This included consideration of the environmental impacts of DND and CAF operations, potential adverse impacts to sensitive ecosystems upon which Indigenous Peoples and other Northerners rely, supporting the exercise of Indigenous traditional practices through the use of access agreements, and generating socio-economic and employment opportunities for Indigenous Peoples; and
- Maintained ongoing dialogue with Indigenous groups on areas of shared interest and projects that benefit Indigenous communities, DND and the CAF, and Canada at large. For example, the Canadian Rangers and the Junior Canadian Rangers programs incorporate the traditional knowledge and culture of their communities, including skills related to hunting, local languages and spiritual ceremonies. These programs contribute to the success of the North Warning System renewal and other related defence infrastructure projects.

DND and the CAF also addressed litigation and other issues in the spirit of reconciliation by working on agreements and claims resolution with numerous Indigenous groups. Specific activities undertaken in FY 2020-21 included the following:

- Worked with Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) on agreements and claims resolution with Indigenous groups with interests related to the Cold Lake Air Weapons Range;
- Worked closely with the Chippewas of Kettle and Stony Point First Nation and Indigenous Services Canada at the former camp Ipperwash to support a temporary housing solution for residents living in the former barracks. This ongoing, collaborative work was led by the Chippewas of Kettle and Stony Point First Nation;
- Built capacity and raised awareness within the Defence Team on the importance of meaningful engagement with Indigenous Peoples and learning opportunities about Indigenous cultures, history, diversity, and traditions;
- Conducted unexploded explosive ordnance clearance on Indigenous lands under the unexploded explosive ordnance Legacy Sites Program. This includes providing related training support to some Indigenous communities to allow for employment and economic development opportunities; and
- Completed the [Y-Jetty and Lang Cove Remediation Project](#)^{xli}, part of DND's Esquimalt Harbour Remediation Project, which included an Indigenous Benefits Plan for the Songhees and Esquimalt

First Nations. The project resulted in over 16 000 hours of direct employment for the First Nations, roughly 2 500 hours of training, and over \$1.4M of goods and services procured from the First Nations.

For more information on the Department of National Defence and the Canadian Armed Forces' plans, priorities and results achieved, see the ["Results: what we achieved"](#) section of this report.

Results: what we achieved

Core responsibilities

Operations

Description

Detect, deter and defend against threats to or attacks on Canada. Assist civil authorities and law enforcement, including counter-terrorism, in support of national security, domestic disasters or major emergencies, and conduct search and rescue operations.

Detect, deter and defend against threats to or attacks on North America in partnership with the United States, including through North American Aerospace Defense Command (NORAD).

Lead and/or contribute forces to North Atlantic Treaty Organization (NATO) and coalition efforts to deter and defeat adversaries, including terrorists, to support global stability. Lead and/or contribute to international peace operations and stabilization missions with the United Nations, NATO and other multilateral partners. Engage in capacity building to support the security of other nations and their ability to contribute to security and the security of Canadians abroad. Assist civil authorities and non-governmental partners in responding to international and domestic disasters or major emergencies.

Results

The CAF continued to deliver on Canada's defence objectives to ensure Canada remained Strong at home, Secure in North America, and Engaged in the world.

During FY 2020-21, the Canadian Armed Forces (CAF) conducted operations at home, across North America, and around the world. The Department of National Defence (DND) and the CAF supported government partners in response to domestic crises (e.g. the COVID-19 pandemic), maintained the defence of North America in partnership with the United States through NORAD, and continued to make valuable contributions to international peace and security alongside allies in deployed operations around the world. We ensured national strategic goals were met for missions from planning to conclusion. The CAF continued to strengthen its collaboration with other government departments and agencies working on the front lines of Canadian national security and strengthened efforts to advance the evolution of joint intelligence surveillance and reconnaissance.

During FY 2020-21, the CAF developed and refined its Joint Targeting process. This resulted in an increased ability to gather and analyze pertinent information, which in turn informed the development of plans that are better able to achieve operational and strategic impacts. In addition, the CAF evolved the targeting enterprise and strategic effects governance, further strengthening operational-level relationships with allies, specifically Five Eyes.

In addition, the CAF incorporated a dedicated Operational Assessment capability into its planning process which makes it possible for the CAF to accurately measure progress and challenges in the attainment of objectives. These assessments facilitates evidence-based adjustment to CAF activities in the pursuit of greater alignment and effectiveness of all CAF operations. Several regional assessments have occurred and significant progress in identifying challenges and successes in operational regions was made; however, COVID-19 hampered the assessment process over the winter as pandemic response planning took priority.

DND and the CAF worked with the Royal Canadian Mounted Police (RCMP) to evaluate the use of drones indoors in tactical police operations. The evaluation of the use of drones indoors was critical to:

- Ensuring organizations tasked with the defence, security and safety of Canadians and Canadian values understood the capabilities available in partner organizations to address a common threat;
- Developing common operating concepts and procedures to facilitate the safe and secure execution of the counter drone mission; and

- Building, broadening and nurturing new and existing relationships to protect Canadians and Canadian values.

The All Domain Situational Awareness (ADSA) Science and Technology (S&T) program delivered a final report on air and maritime surveillance technologies. Defence is formulating a broader scope for its S&T program focused on situational awareness to enhance operational effectiveness.

In winter 2021, the IDEaS program consulted with private industry, consortia and innovator associations, and launched a Request for Information, to solicit their input on a proposed new program element called the “Classified Stream”. This new stream will enable DND and the CAF to issue classified challenges to industry and support new entrants into this domain. The department developed an aggressive, proactive approach to Cyber defence monitoring and reconnaissance. The development of teams, and learning from our partners at the Communications Security Establishment (CSE), allowed Canada to assume an assertive posture in the cyber domain, which enhances our ability to defend as well as improve the conduct of active cyber operations against potential adversaries in the context of government-authorized military missions.

DND established a Joint Operations Fusion Laboratory within the Canadian Joint Warfare Centre (CJWC) located at Shirley’s Bay, Ontario in August 2020. The Joint Operations Fusion Lab aims to design, test and experiment with new and emerging technologies and data curation approaches to increase capabilities in to Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR). At the same time, the Lab will ensure interoperability of C4ISR networks with allies.

The NATO Battlefield Information Collection and Exploitation System was tested at the Joint Operations Fusion Lab, demonstrating the ability to receive and channel data through the system, thereby making live operations possible.

Work to establish contracting methods for multi-source Airborne Intelligence, Surveillance and Reconnaissance platforms to support operations continues to advance, leveraging extant contracts with other government departments.

The department worked to synchronize development efforts with our allies in order to foster interoperability and strengthen intelligence sharing relationships. FY 2020-21 accomplishments included the following:

- Developed policies and procedures to ensure safe and effective intelligence sharing with government partners and allies;
- Collaborated in intelligence analysis and sharing across the department and with allies;
- Maintained a standing intelligence liaison network with operational-level allied headquarters and leveraged this network for planning collaboration and information exchange purposes; and
- Participated in Joint Intelligence organization Regional Operational Outlook conferences to support CAF Force Employment.

Through the support we received from our partners, the CAF successfully implemented non-kinetic targeting processes, identified the respective military authorities involved, and outlined the rules of engagement and the detailed coordination that are necessary for cyber operations.

[Incremental Costs for Major Canadian Armed Forces Operations^{xliii}](#) and information on [current CAF operations and exercises^{xliiii}](#) are available on the Department of National Defence and the Canadian Armed Forces’ website.

Gender-based analysis plus (GBA Plus)

The department continued to integrate into CAF’s planning and operations, and into the wider CAF institution, guidance provided from: the United Nations Security Council Resolutions; the Canadian National Action Plan on United Nations Security Council Resolutions (UNSCR) 1325; NATO policy and guidance; and Government of Canada direction on GBA Plus. While many operations faced challenges

this fiscal year as a result of the pandemic environment, GBA Plus was still used to inform the planning, preparation, and execution of all operations. In FY 2020-21, the department:

- Ensured that operation orders for deploying forces contained an annex on Gender Perspectives, as part of the Operational Planning Process;
- Issued a mission and rotation specific directive to each deploying Task Force Commander which contained clear guidance on Gender Perspectives;
- Maintained Human Security and Gender Perspectives as important planning factors, drawn from an analysis of the local population and operating environment;
- Considered and incorporated gender considerations, and intersectionality in operations to improve our understanding of the local population within the area of operation, in order to better assess the effect of our operations in their country and therefore improve the effectiveness of our operations;
- Ensured that deployed Commanders and Task Force personnel completed the required gender training and subsequently factored gender perspective considerations into daily operations and reporting; and
- In addition, the Directorate for Gender Equality and Intersectional Analysis facilitated the application of GBA Plus to the development of the department's COVID-19 response measures, including Return to Business Planning, as well as the use of GBA Plus in the Defence Team's contribution to the Government of Canada's emergency response measures for health care support in long-term care homes, with vulnerable populations and in Canada's North.

Experimentation

In regards to a pan-domain *Agile Command and Control (C2)* experiment, the CJWC introduced a series of deep, analytical research topics using collaborative software tools. The culmination of this work was the interim completion of two key C2 initiatives: a C2 Baseline and a C2 Assessment Framework. Defence reached out to academia, national, and international partners such as NATO and The Technical Cooperation Program, in order to obtain advice on emerging and disruptive technologies for Agile C2 and Joint Intelligence, Surveillance and Reconnaissance (JISR). CJWC assumed command of the Joint Operations Fusion Lab in order to integrate its function and output into the CJWC mandate. The Lab serves to mitigate risk for the current and future CAF by examining and evaluating emerging JISR Fusion, C2 and targeting concepts and technologies through experimentation, prototyping and network integration, which in turn inform pan-domain capability development and acquisition processes. CJWC continued to serve as national lead and coordination office for NATO's Coalition Warrior Interoperability Experiment. Due to COVID-19, the Coalition Warrior Interoperability Experiment was executed as a virtual event.

Additional Defence-related experimentation activities are outlined in this report under [Core Responsibility 4 – Future Force Design](#).

Key Corporate Risk(s)

There are many risks associated with the Operations Core Responsibility. Two of the Key Corporate Risks directly associated with Operations are described below:

Physical Environment – There is a risk that changes to the physical environment of Canada and the world, including changes due to climate change, will impact the type, frequency and conduct of DND and CAF activities.

Cyber Intrusion – There is a risk of serious harm (e.g. loss of sensitive data, disruption to the network, physical electronic damage, loss of confidence in institution/reputation, etc.) resulting from a cyber intrusion.

The risks above can affect the department's ability to achieve the Departmental Results of the Operations Core Responsibility.

As the Defence Departmental Results Framework reflects a chain of delivery from conceiving of the required armed forces, to developing them and then executing operations, the activities to mitigate the risks to Operations can also be found in other Core Responsibilities which deliver building blocks that make the results of Operations possible.

Many of the preventative and mitigating controls for these risks are described as activities of each Departmental Result below.

Departmental Result 1.1 – Canadians are protected against threats to and attacks on Canada

Through [Operation LIMPID](#)^{xlii}, the Joint Task Forces Pacific, Atlantic and North through their Joint Operations Centres, in cooperation with their associated Maritime Security Operations Centres, and other government department partners, conducted daily surveillance and presence missions by alternating various assets including contracted air surveillance, Royal Canadian Air Force (RCAF) Long Range Patrol Aircrafts and RCN ships as well as with ongoing space surveillance capabilities. The information gathered from surveillance missions was forwarded to the Regional Joint Operations Centres where teams of analysts worked at identifying abnormal patterns that might give clues on activities that merit further investigation. This operation allows the CAF to better predict, monitor and respond to crises in addition to contributing to the assertion of sovereignty on behalf of the Government of Canada.

In light of the current COVID-19 pandemic, the Minister of National Defence and the Minister of Public Safety established a comprehensive Request for Assistance Agreement detailing a pre-approved list of tasks to ensure a quicker and more effective response to COVID-19, including vaccination efforts. CAF assistance to the Public Health Agency of Canada (PHAC) on border measures included contracting expertise and logistical support in setting up the testing points at the Canada/United States border.

- [Operation VECTOR](#)^{xliii}: The CAF support to COVID-19 vaccination distribution and administration across Canada. In FY 2020-21, the CAF fulfilled several Requests for Assistance as part of Operation VECTOR. A team of approximately 40 CAF members was seconded to support the PHAC with ongoing planning and coordination for the transport, storage, and distribution of vaccines. These included senior leaders, logistics experts, planners, a pharmacist, a physician, health care administrators and engineers. Additionally, the CAF provided planners and liaison officers to the provinces and territories to support vaccination distribution, delivered freezers to Nunavut and Yukon for the storage of vaccines, and provided the Arena at Canadian Forces Base (CFB) Comox to the province of British Columbia for use as a mass vaccination centre. Furthermore, the CAF activated Canadian Rangers and supported the vaccination of Canada's Indigenous populations in remote and isolated First Nations communities. The CAF also initiated support to Indigenous Services Canada with the administration of vaccinations to on-reserve communities in Manitoba with medical assistance teams and an Air Task Force for the mobility of the CAF as well as personnel from other government departments. Finally, the CAF supported Global Affairs Canada in the distribution and administration of vaccines outside of Canada, utilizing existing deployed operations as vaccination hubs.

Operation VECTOR

Private Pierre-Jean Kingsberry from *5^e Ambulance de campagne*, attached to the Land Task Force, prepares to give COVID-19 vaccine to on-reserve Indigenous communities in collaboration with Indigenous Services Canada, local Indigenous authorities and Public Safety in Nisichawayasihk Cree Nation (Nelson House), Manitoba, during Operation VECTOR on 29 March 2021.



(Photo credit: Corporal Matthieu Racette)

- **Operation LASER^{xlvi}**: The CAF's response to a worldwide pandemic situation. The Canadian Joint Operations Command (CJOC) leads this operation, and is the command authority for the six standing Regional Joint Task Forces, through which CAF support is delivered. They are situated in key locations across the country and provide operational command and control for task forces in and/or deployed to their respective regions. Operation LASER highlights include the following:
 - Provided support to northern, remote and isolated communities affected by the pandemic with Canadian Rangers. The Canadian Rangers coordinated activities with the Chief and Council and provided transportation assistance as well as food, water, and supply delivery to those in isolation. Additionally, the Canadian Rangers provided support to a public awareness program on health measures in effect;
 - Provided medical teams and General Duty Support troops to assist local health authorities in northern, remote and isolated communities struggling from the effects of COVID-19;
 - Established a local Alternative Isolation Accommodation which included nurses, health care assistants and general duty personnel;
 - Provided contact tracers to Public Health Ontario to conduct COVID-19 related follow-up, contact tracing, phone calls, and reporting;
 - Delivered one ventilator (loan and transport) to Nova Scotia;
 - Provided logistical planners and warehouse specialists to the PHAC for personal protective equipment and other equipment;
 - Supplied medical and general duty support to Long-Term Care Homes in Quebec (47 facilities) and Ontario (seven facilities); and
 - Arranged general duty, contracting, and real life support to 16 Land Points of Entry. The PHAC requested CAF support at the national and tactical levels. National level support included reinforcing federal interagency planning, contracting support, and enabling the PHAC Operations centre to establish a common operating picture.

- **Operation LENTUS**^{xlvii}: The CAF's response to forest fires, floods and natural disasters in Canada. Provincial and territorial authorities are the first to respond when a major natural disaster occurs. If they become overwhelmed, they may ask the CAF for help. When the CAF responds to such a crisis, it is known as Operation LENTUS. Although a large scale Operation LENTUS did not occur, CAF assistance was provided to respond to flooding in Ontario and Rocky Mountains National Army Cadet provided support to combat wildfires in Alberta.
- Other Requests for Assistance fulfilled included:
 - Assistance to Law Enforcement Agencies by providing air support to searches in Nova Scotia and Quebec;
 - Logistical and social worker support to the RCMP in the aftermath of the mass shooting in Nova Scotia; and
 - Air support in Quebec in the annual illicit marijuana eradication operation, Operation SABOT.
- **Operation SABOT**^{xlviii}: The CAF assisted the RCMP in the national eradication of illicit marijuana with helicopter support for Operation SABOT. The CAF deployed nine personnel and flew 24 out of 25 planned sorties (one cancelled due to weather). 51 197 illicit marijuana plants were destroyed with an approximate value of \$30.7M CAD during FY 2020-21. The RCMP will not be seeking the assistance of the CAF for Operation SABOT starting in FY 2021-22 due to other options being available to the RCMP.

Operation LASER

Sergeant Martin Lapalme-Lavolette, a medical technician with the 41st Canadian Forces Health Services Centre, assists a resident at Sainte-Anne Hospital in Montreal, Quebec, during Operation LASER in May 2020.



(Photo Credit: Corporal Genevieve Beaulieu)

- **Operation PALACI**^{xlix}: This operation is the CAF's contribution to Parks Canada's avalanche-control program in Rogers Pass, British Columbia, where the Trans-Canada Highway and the Canadian Pacific Railway cross the Selkirk Mountains in British Columbia. Its objective is to prevent uncontrolled, naturally-occurring avalanches and thus prevent blockage of the essential road and rail links between coastal British Columbia and the rest of Canada. Operation PALACI is conducted under a Memorandum of Understanding between DND and Parks Canada, which has jurisdiction over Rogers Pass because it lies within the boundaries of Glacier National Park. The CAF assisted Parks Canada for avalanche control with two rotations of 17 CAF personnel from November 2020 to April 2021.

During FY 2020-21, the CAF:

- Collaborated with Canadian national security community partners through regular intelligence exchanges;
- Coordinated Canadian national security community intelligence capabilities deployment; and
- Formalised integration of Canadian national security community intelligence capabilities into CAF Joint Operations through the planning process.

The Canadian Special Operations Forces Command (CANSOFCOM) remained positioned to advise, enable and lead in the detection, pursuit and defeat of asymmetric threats to Canadians and Canadian interests at home and abroad through a cooperative joint interagency and multinational approach. In FY 2020-21, CANSOFCOM:

- Maintained detailed understanding of evolving asymmetric threats abroad and their potential implications in Canada;
- Provided Special Operations Forces support to CAF missions;
- Maintained forward postured forces to enable high-readiness response to mitigate threats in North America and around the world; and
- Collaborated with allies and National Security partners to identify potential threats.

Canadian Special Operations Forces Command

Members of the CANSOFCOM hone their unique skillsets through routine training events to be able to respond to a variety of threats at home and abroad.



Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
1.1 Canadians are protected against threats to	% of requests for assistance that are fulfilled	100%	31 March 2021	100%	100%	100%*

and attacks on Canada	% of force elements that are deployed within established timelines	100%	31 March 2021	100%	100%	100%
	% of operations that meet stated objectives	100%	31 March 2021	92%	98%	95%**
	Extent to which the Canadian Armed Forces is effective in domestic operations	The Canadian Armed Forces is effective in the conduct of domestic operations	31 March 2021	Not Available New qualitative indicator as of 2019-20	This is a qualitative indicator****	This is a qualitative indicator ****

Notes:

* CAF support was provided in a timely manner to respond to all tasked Requests for Assistance (RFAs). Furthermore, the CAF terminated the support only when all transition criteria were met.

** Canadian Armed Forces (CAF) domestic operations demonstrated success in the overall process to act on the influx of RFA from our civilian counterparts. Our centre of gravity, domestically, is unity of purpose with Other Governmental Departments and Agencies, and bi-lateral operational partners which we develop, define and foster through a shared understanding of the defence, safety and security environment. Moving forward, it should be noted that capability requirements, resources and interoperability continue to require refinement from all parties involved, in order to meet stated objectives. COVID-19, in sync with a number of exacerbating operational factors, has hampered to some degree the ability to project operational impacts and achieve desired stated objectives. The remaining 5% corresponds to known capability deficiencies that are being addressed through the Defence Investment Plan.

*** This is a qualitative indicator and results are described as successes and challenges throughout Departmental Results 1.1 of the [2019-20 Departmental Results Report](#)ⁱ.

**** The CAF provided support to civilian organizations in response to a range of crises, including: humanitarian crises and COVID-19 response. In the FY 2020-21, Operations LASER and VECTOR were activated in order to aid the Canadian public and regional authorities. All operations were handled effectively, deploying members within 24 hours upon operation approval, and delivered through to conclusion or handover to an appropriate agency. The CAF deployed 100% of the identified personnel. Capability enhancement initiatives, such as the All Domain Situational Awareness Science and Technology Program, seek to resolve challenges in the Arctic due to existing communication and Joint Intelligence, Surveillance and Reconnaissance (ISR) deficiencies impacting interoperability with partners and other governmental departments.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)ⁱ.

Departmental Result 1.2 – People in distress receive effective search and rescue response

In FY 2020-21, there were 8 809 Search and Rescue (SAR) incidents (cases), with 1 821 cases having a final classification of 1 (Distress) or 2 (Imminent Distress). All Joint Rescue Coordination Centre SAR cases were handled effectively and delivered through to conclusion or handed over to an appropriate agency.

The 8 809 cases generated 648 SAR taskings for the CAF air assets. In the other cases, Joint Rescue Coordination Centres utilized assets of opportunity, including civilian aircraft and vessels that were available to resolve cases quickly and efficiently when safe and appropriate to do so.

Of the 648 times tasked, the CAF met their response timeline in 592 cases; therefore, 91 percent of the time. There are many circumstances that determine how a tasked SAR unit responds and therefore whether the response time can be met. Inclement weather and time to load additional fuel for long, extended missions are the main causes of delays. SAR mission coordinators used every tool at their disposal to ensure all responses to SAR incidents in Canada are effectively conducted and/or coordinated to conclusion, or to handover to an appropriate agency.

For more on search and rescue, please visit the Department of National Defence and the Canadian Armed Forces' [Search and Rescue](#)ⁱⁱⁱ webpage.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
1.2 People in distress receive effective search and rescue response	% of coordinated maritime, aeronautical and joint response to search and rescue incidents deemed effective	100%	31 March 2021	100%	100%	100%*
	% of requests for Canadian Armed Forces aeronautical search and rescue assistance that are fulfilled	100%	31 March 2021	100%	100%	100%**
	% of Canadian Armed Forces aeronautical search and rescue operations that meet established standards	100%	31 March 2021	95.2%	85%	91%***

Notes:

* There were 8 809 Search and Rescue (SAR) incidents (cases), with 1 821 cases having a final classification of 1 (Distress) or 2 (Imminent Distress). All Joint Rescue Coordination Centre SAR cases were handled effectively and delivered through to conclusion or handed over to an appropriate agency.

** The 8 809 cases generated 648 SAR taskings for the Royal Canadian Air Force air assets. In the other cases, Joint Rescue Coordination Centres utilized assets of opportunity, including civilian aircraft and vessels that were available to resolve cases quickly and efficiently when safe and appropriate to do so.

*** Of the 648 times tasked, the CAF met their response timeline in 592 cases; therefore, 91% of the time. There are many circumstances which determine how a tasked SAR unit responds and therefore whether the response timeline can be met. Inclement weather and time to load additional fuel for long, extended missions are the main causes for delays. SAR mission coordinators used every tool at their disposal to ensure all responses to SAR incidents in Canada are effectively conducted and/or coordinated to conclusion, or to handover to an appropriate agency.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)ⁱⁱⁱ.

Departmental Result 1.3 – Canada's Arctic sovereignty is preserved and safeguarded

The changing security environment requires that the CAF enhances its ability to operate in the Arctic. As such, the CAF has been conducting training and presence operations, that seek to improve mobility and enhance surveillance capabilities in Canada's North. This increased familiarity and situational awareness will make the success of CAF operations in this harsh operating environment possible.

[Operation NANOOK](#)^{liv} is a presence operation and training opportunity designed specifically to enhance surveillance capabilities in Canada's North, as well as demonstrate the CAF's ability to project and sustain forces therein. The Arctic Campaign Plan is not yet complete; however, the concepts expressed in the draft are being implemented in time for its completion.

Operation NANOOK

Overflying Royal Canadian Navy frigate Her Majesty's Canadian Ships (HMCS) *Ville de Québec* in August 2020, a RCAF CP-140 Aurora aircraft patrols the sky during Operation NANOOK.



- The interagency exercise of Operation NANOOK was postponed due to COVID-19 restrictions. However, the multinational maritime live exercise, the domain presence objective and the surveillance and awareness objectives were both successfully completed, though reduced in scope.
- The [CAF Arctic Training Centre in Resolute Bay](#)^{lv}, Nunavut, provided operational support to approximately 300 soldiers and support elements for the Land Task Force for Operation NANOOK-NUNALIVUT.

Through [Operation LIMPID](#)^{vi}, presence operations in the North have been conducted on a routine basis during the navigable season by Canadian Long Range Patrol Aircraft that were also used to support NORAD deterrence missions in the high North. Furthermore, new technologies and capabilities are continually being trialed and tested in the Arctic, most notably through Operation NANOOK.

Three Arctic Airpower Seminars were held to exchange ideas, find practical applications and build relations among defence, industry, academia and Indigenous stakeholders.

To continue the efforts of the five-year ADSA program, the ADSA Executive Group was established to guide the provision and usage of integrated science-based advice to DND, CAF and NORAD leadership on the performance and viability of Arctic surveillance technologies and concepts.

In collaboration with the United States Air Force Research Laboratory, Defence demonstrated air target detection with a mid-latitude, north-looking over-the-horizon-radar. Sufficient knowledge has been gained to develop an initial mid-latitude operational prototype. Additional research needs to be conducted to develop a polar north-looking over-the-horizon-radar.

The Arctic Security Forces Roundtable was cancelled due to COVID-19 travel restrictions; however, the Arctic Security Working Group was successfully held through a combination of in-person and virtual attendance.

Work continued to progress on the Nanisivik Naval Facility, although it was impacted by COVID-19 restrictions. The facility, located in Nunavut, will be the RCN's forward logistics site and will permit the refuelling of naval and other government ships, including the new Arctic and Offshore Patrol Ships, operating in Canada's North. Site work in FY 2020-21 included the following:

- Received the sealift in Arctic Bay;
- Transported/stored/secured materials at Nanisivik Naval Facility;
- Videoed the leak detection system;
- Completed a precision survey to assess the continued dock movement and the pipeline stretch (conducted by Underhill Geomatics); and
- Completed the operation and maintenance manuals in draft form.

Currently, the contractor remains in care/custody/control of the site, performing weekly inspections with all cold-sensitive equipment safely in heated storage in Arctic Bay, Nunavut.

Northern Reaches – The Canadian Arctic Land Operating Concept, the operating concept for Land Forces in the Canadian Arctic was conditionally approved for publication in 2020; publication deferral was due to ongoing DND policy work on Continental Defence to ensure alignment. Final approval and publication is expected during FY 2021-22. Once published, it will replace Northern Approaches (2013) and address the very specific and unique aspects of operating in the Canadian Arctic, as part of *Strong, Secure, Engaged: Canada's Defence Policy (SSE)*, including the following SSE initiatives:

SSE capital projects related to SSE 43 (acquire all-terrain vehicles, snowmobiles and larger tracked semi-amphibious utility vehicles optimized for use in the Arctic Environment) and SSE 106 (Enhance the mobility, reach and footprint of the CAF in Canada's North to support operations, exercises, and the CAF's ability to project force into the region) initiatives have been aligned with their project milestones as outlined in the Capital Investment Plan;

- The Canadian Ranger Enhancement was initiated in 2020 and will address the SSE 108 initiative (enhance and expand the training and effectiveness of the Canadian Rangers to improve their functional capabilities within the CAF) requirements;
- COVID-19 restrictions limited Arctic joint exercise participation in 2020; however, participation will be re-invigorated once COVID-19 restrictions permit; and
- Information-sharing on the Arctic was addressed through an agreement between the Canadian Army and United States Army to explore opportunities to prepare soldiers, units and logistic hubs to better operate in austere cold-weather and Arctic environments.

The Arctic Training Centre completed courses centred on this advanced land warfare niche capability that included participation of international partners in the highly sought Arctic Operations Course. This same infrastructure supports yearly Arctic deployments (NANOOK-series) demonstrating CAF's capability to operate in all environments.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
1.3 Canada's Arctic sovereignty is preserved and safeguarded	% of Arctic operations and exercises that meet stated objectives	100%	31 March 2021	100%	100%	95%*

Notes:

* The Canadian Armed Forces (CAF) continued a year-round presence in Canada's North. This presence continued to take the form of Joint Task Force (North), the CAF's northern headquarters, and several exercises and sovereignty operations that were held in the Arctic. These activities shared the same purposes: to assert Canada's sovereignty in the region, to strengthen CAF capabilities to conduct Arctic operations, and to improve the CAF's ability to work with government partners in response to northern safety and security issues. Climate change will impact the nation's ability to detect, deter, and degrade threats to Canadians and Canadian interests in the future, likely stressing the need for increased/improved resources specific to the Arctic. Interoperability deficiencies in existing communication systems between the CAF and other governmental departments caused a 5% reduction in efficacy.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{vii}.

Departmental Result 1.4 – North America is defended against threats and attacks

During FY 2020-21, the CAF ensured North America was defended against threats and attacks through the employment of conventional and special operations capabilities and collaborated with allies, regional partners and other Canadian government departments and agencies to position itself to deter, detect, confront and defeat pan-regional threats from nation-states and violent extremist organizations. Security and defence objectives were realized by:

- Coordinating contributions to multinational and interagency coalitions;
- Providing support to whole-of-government partners when requested;
- Conducting Capacity Building through bilateral and multinational forums, and multinational training activities to address trans-regional threats at the source;
- Maintaining strong relationships with allies, interagency partners and the Global Special Operations Force Network; and
- Engaging in dialogues on continental defence planning, including future technological solutions to situational awareness in the Arctic and sea approaches to North America.

Through the NORAD Agreement, the CAF conducted binational maritime and aerospace warning and aerospace control activities to protect and respond to threats against North America. Maritime and aerospace warning missions involved the monitoring of aerospace and maritime activity from a continental perspective while maintaining — when authorized — awareness in the land, space, cyber and information domains to detect and characterize threats against Canada or the United States. Throughout FY 2020-21, key activities included:

- Operation NOBLE EAGLE: Throughout FY 2020-21, NORAD supported Canadian and United States government departments, agencies, and partners to defend the air space of Canada and the United States from airborne threats. To support NORAD operations, Canadian and United States military personnel and resources executed a number of exercises. These exercises provided valuable opportunities to practise the binational and interagency coordination procedures required to act clearly and decisively in a crisis situation. In collaboration with DND allies and civilian partners, including the RCMP and Transport Canada, the CAF remained prepared to respond to all forms of aerial threats to Canada and the United States. The Canadian CF-18 Hornets form an integral part in the defence of North America. Along with our American partners flying F-22s in the Alaskan NORAD Region, and flying F-22s and F-16s in the Continental NORAD Region, they, in conjunction with ground radars and systems of the North Warning System, and E-3 Airborne Early Warning aircraft, help to detect, deter, and control North American airspace from asymmetric and symmetric threats.

Through a layered and integrated system of surveillance platforms and Command and Control (C2) systems, NORAD gathered, processed, assessed and disseminated intelligence and information related to man-made objects in the air and space domains.

To achieve information dominance and enhance C2, NORAD implemented the PATHFINDER program which aggregated independent, inter-agency, pan-domain data sources (air, land, maritime, space and cyber) to develop a fused operational picture.

Through a variety of Canadian and American information sharing networks and mutual support arrangements, NORAD processed, assessed and disseminated intelligence and operational information associated with activities within internal waterways and the maritime approaches to North America. This enabled the development of a comprehensive shared understanding of maritime activities to better identify potential maritime threats to North American security, and inform and warn Canadian and American decision-makers of maritime threats to or attacks against Canada and the United States.

Despite COVID-19 presenting an unprecedented challenge, the NORAD and USNORTHCOM Command Centre maintained continuous operations throughout the pandemic.

The CAF response and support to the pandemic restricted significant development in the Evolution of North American Defence (EvoNAD) Study. The CAF, however, examined plans, initiatives and emerging

threats to identify capability gaps, and to identify solutions to address the vulnerabilities posed by the gaps in support of delivering SSE initiative 111 NORAD Modernization. In FY 2020-21, NORAD addressed information-sharing on the Arctic through an agreement between the Canadian Army (CA) and the United States Army to explore opportunities to prepare soldiers, units and logistic hubs to better operate in austere cold-weather and Arctic environments.

In FY 2020-21, the CAF outlined the requisite capabilities and areas of investments required to effectively execute the Continental defence missions and fully define SSE Initiatives 109 and 111, North Warning System renewal and NORAD Modernization. Key activities included the following:

- CAF investigated future technological solutions and capabilities for maintaining situational awareness in the polar region and sea approaches to North America; and
- NORAD developed a Capability Requirements and Proposed Investments Summary to describe capability deficiencies that affect NORAD from executing its assigned missions.

More details on SSE Initiatives can be found in the [Strong, Secure, Engaged: Canada's Defence Policy](#)^{lviii}.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
1.4 North America is defended against threats and attacks	% of continental operations that meet stated objectives	100%	31 March 2021	100%	100%	95%*
	% of Canada's commitments and obligations to the North American Aerospace Defense Command agreement that are met	100%	31 March 2021	100%	100%	100%**
	Extent to which the Canadian Armed Forces is effective in continental operations	The Canadian Armed Forces is effective in the conduct of continental operations	31 March 2021	Not Available New qualitative indicator as of 2019-20	This is a qualitative indicator****	This is a qualitative indicator****

Notes:

* The Canadian Joint Operations Command (CJOC) executed continental and inter-agency contingency planning, operational engagements, contingency plan rehearsals and exercises ensuring the Canadian Armed Forces (CAF) was prepared and contingency forces ready to respond quickly to domestic safety and security requirements. CJOC, through its subordinate formations, units and components built and maintained strong joint, inter-agency and bi-lateral relationships and promoted shared situational awareness to facilitate early warning, cooperation and interoperability. Interoperability deficiencies in existing communication systems between the CAF and other governmental departments caused a 5% decline in efficacy.

** The CAF's ability to meet its North American Aerospace Defense Command (NORAD) commitments is determined by examining a number of factors, including: personnel assigned to the NORAD mission, and Canadian NORAD Regions ability to maintain an appropriate readiness level. NORAD continued to work on developing data-centric performance metrics.

*** This is a qualitative indicator and results are described as successes and challenges throughout Departmental Results 1.4 of the [2019-20 Departmental Results Report](#)^{lix}.

**** The CAF's effectiveness was reflected in its ability to enhance the mobility, reach and footprint of Canadian interests in Canada's north through increased support to operations, exercises, and demonstrating the ability to project and sustain forces in the region. Furthermore, it advanced interoperability, situational awareness and information sharing initiatives through collaboration with NORAD and USNORTHCOM, NATO engagements, the Arctic Security Working Group, and support to NORAD and USNORTHCOM Exercise VIGILANT SHIELD.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{lx}.

Departmental Result 1.5 – Canadian Armed Forces contribute to a more stable and peaceful world

During FY 2020-21, DND and the CAF continued to contribute to a more stable, peaceful world by maintaining ongoing commitments with regional partners around the globe. This was accomplished by enabling early warning of emerging crises, in conjunction with our Five Eyes allies and NATO Partners, via timely and credible intelligence processing, exploitation and dissemination. During FY 2020-21, we contributed to the following missions:

- As part of [Operation CARIBBE^{lxii}](#), the CAF participated in United States-led enhanced counter narcotics operations in the Caribbean and Central America, providing Royal Canadian Navy (RCN) and RCAF assets to work in co-operation with our allies to counter transnational criminal organizations operating in the region. The CAF has conducted Operation CARIBBE since 2006 with successive deployments of RCN ships and RCAF aircraft. Although it is challenging to measure the impact of this mission on substance trafficking at home, during those fifteen years, the CAF has contributed to the disruption or seizure of approximately 108 000 kilograms (approximately 238 000 pounds) of cocaine and more than 6 725 000 kg (approximately 14 million pounds) of illicit marijuana. During FY 2020-21, a CP-140 Aurora aircraft and four HMCS were deployed to the region to participate in detection and monitoring. Highlights for FY 2020-21 include:
 - Deployed vessels spent 130 days at sea and aircraft flew a total of 148.8 hours. Deployed assets disrupted a total of 4 165 kilograms (approximately 9 182 pounds) illicit drugs, valued at approximately \$90.4M United States Dollars by working with partners in the multinational campaign;
 - CP-140 aircraft contributed to various interceptions resulting in the seizure of approximately 3 000 kilograms (approximately 6 613 pounds) of cocaine;
 - HMCS *Brandon* intercepted 870 kilograms (approximately 1 918 pounds) of cocaine; and
 - HMCS *Saskatoon* intercepted 250 kilograms (approximately 550 pounds) of cocaine and 45 kilograms (approximately 99 pounds) of illicit marijuana.
- **Operation ACKEE:** The department continued to collaborate with Global Affairs Canada, to mentor, enable and create opportunities for the Jamaica Defence Force to grow as a Special Operations Forces leader to more effectively combat trans-regional threats in the Caribbean Basin. Other regional partners include Belize, the Bahamas, Barbados, Trinidad and Tobago and Guyana.
- [Operation ARTEMIS^{lxiii}](#): The CAF mission to combat terrorism, and contribute to the security and stability of the waterways in the Middle East, which encompass some of the world's most important shipping lanes. Participation is through a multinational maritime partnership, the Combined Maritime Forces, which exists to uphold the International Rules-Based Order by countering illicit non-state actors on the high seas. Canada's role has primarily been under Combined Task Force (CTF)-150 conducting Maritime Security Operations. DND and CAF deployed 31 military personnel and one civilian Policy Advisor with CTF-150 Headquarters. Although there were no ships or aircraft deployed during FY 2020-21 in support of Operation ARTEMIS, in January 2021 a RCN officer assumed command of the multinational efforts. The mandate has been extended until July 2021.
- [Operation CALUMET^{lxiii}](#): Canada's support to the Multinational Force and Observers. The Multinational Force and Observers is an independent peacekeeping operation in the Sinai Peninsula, with Canadian participation since September 1985. FY 2020-21 was a lower tempo year for Operation CALUMET due to the restrictions on movement put in place to protect the force from COVID-19. However, CAF members still filled the high profile positions of Chief Liaison and Force Sergeant Major within the Multinational Force and Observers. In addition, CAF personnel filled senior positions in operations, training, air movements, and military policing sections. The Multinational Force and Observers had a reduced ground surveillance posture in FY 2020-21 but still conducted several hundred air missions along with construction of a large expansion of one of its Remote Sites used for verification of the Israeli-Egyptian peace treaty.

- **Operation FREQUENCE^{lxiv}**: The CAF supports France under Operation FREQUENCE. Using military aircraft, the CAF moves French military equipment and personnel between France and the Sahel region of Africa. The Operation FREQUENCE flights support global efforts in the region against terrorism; doing so helps make the region more secure and stable. It also helps with: security and stability across the globe, strengthening the Canada-France partnership, and ultimately enabling interoperability between the two armed forces. Operation FREQUENCE had six deployments, transporting over 135 424 kilograms (approximately 299 000 pounds) of cargo by CC-17 Globemaster and CC-130J Hercules aircraft.
- **Operation FOUNDATION^{lxv}**: The CAF contribution to coalition efforts, led by the United States, to counter terrorism. The CAF contribution included personnel deployed to a number of United States headquarters, including:
 - United States Air Forces Central in Qatar and the United Arab Emirates;
 - United States Naval Forces Central in Bahrain; and
 - Combined Maritime Forces in Bahrain.

Members served as key staff within these host headquarters and provided an important link between the headquarters and the CAF.

- **Operation GLOBE^{lxvi}**: CAF members are sometimes asked to help other Government of Canada departments and agencies with various tasks or to participate in Government of Canada activities abroad. When these tasks involve working outside of Canada, CAF members often deploy under Operation GLOBE. During the first iteration of this mission, Canada provided five flights that repatriated 870 Canadians from Asia at the onset of the COVID-19 global pandemic. This required forty CAF medical personnel to ensure the safety and health of the repatriated Canadians. The second iteration of this mission was in response to the United Nations' request for transport of COVID-19 related humanitarian and medical supplies, on behalf of the World Food Programme and the World Health Organization; the CAF provided a CC-17 Globemaster aircraft and associated crew for airlift support out of Panama Pacifico Airport between July and August 2020. The RCAF flew seven sorties delivering over 82 500 kg of medical supplies to seven countries in Central America. The third iteration of the mission resulted in Canada repatriating six Canadians from the embassy staff in Ukraine to Canada during Ukraine's first wave of the COVID-19 global pandemic.



- **Operation ILLUMINATION^{lxvii}**: This operation employed CAF personnel in Iceland to provide surveillance support while their country's air surveillance radars underwent scheduled maintenance and upgrades. From the beginning of February 2020 to May 2020, the CAF deployed personnel and a mobile air surveillance radar system via strategic airlift to Iceland. The CAF's support ensured uninterrupted long-range radar coverage for Iceland. The radar system covered the Greenland-Iceland-United Kingdom gap, which is a strategic transit route of the North Atlantic.

- **Operation IMPACT^{lxviii}**: The CAF contribution to whole-of-government approach to the Middle East region. This operation complements the work of other Canadian government departments and agencies, such as Global Affairs Canada. Throughout FY 2020-21, the CAF provided capacity-building support to Iraq, Jordan, and Lebanon. Key efforts included:
 - Providing Training, Advice, and Assistance to Host Nation security forces in their operations to contain and degrade Daesh insurgency in order to prevent their re-emergence as a significant threat to regional stability;
 - Commanding NATO Mission Iraq (NMI) for a second year, until November 2020. Achievements included a significant repositioning of forces due to COVID-19 and then shifting NMI's focus from tactical level training to institutional and ministerial focused reform to increase the Iraqi Security Forces' self-sufficiency. Operation IMPACT also continued its capacity building efforts with the Jordanian and Lebanese Armed Forces, delivering tactical level training to both militaries, with emphasis placed on: enhancing their logistics; Chemical, Biological, Radiological and Nuclear defence; and female engagement capabilities. This complemented our existing efforts in the Global Coalition against Daesh by strengthening Iraqi Security Forces and Iraqi military education institutions to help prevent the resurgence of Daesh;
 - Completing the construction of 65 km of border road and the rehabilitation of 11 watch towers along Jordan's northern border with Syria. Both efforts will allow the Jordanian Armed Forces to better respond to threats in the region;
 - Conducting gender integration activities with the Armed Forces of Iraq, Lebanon, and Jordan that included specialized training, leadership development and force integration for an all-female Jordanian infantry platoon; and
 - Keeping Canadian Training and Assistance Teams in place during the COVID-19 pandemic, making Canada a leader in restoring in-person training. This was especially important in Lebanon, where Canadian support to developing institutional technical and logistical capability of the Lebanese Armed Forces contributes to sustainable border security and internal stability.
 - Other significant Operation IMPACT contributions in FY 2020-21 were:
 - An Air Task Force supporting Coalition efforts in the region. Canada's two CC-130J Hercules aircraft provided a significant boost to Coalition Force efforts in the Middle East. In total, Canada's CC-130J Hercules aircraft moved over 1 133 890 kilograms (approximately 2.5 million pounds) of cargo and over 4 500 passengers; and
 - The CAF maintained a regional command and support hub in Kuwait to enable operations in multiple countries in the Middle East, which serves to amplify Canada's standing as a relevant and reliable partner.
- **Operation KOBOLD^{lxix}**: The CAF mission in Kosovo. It is Canada's contribution to the Kosovo Force: a NATO-led peace-support operation. The CAF provided a five personnel Task Force in support of Kosovo Force and logistics support.
- **Operation NABERIUS^{lxx}**: Collaborated with Global Affairs Canada, to train, mentor and enable Nigerien Military and Security Forces to address terrorism within Niger and regionally as part of pan-Sahel and pan-African efforts.
- **Operation NEON^{lxxi}**: The CAF contribution to the multinational efforts to enforce UNSCR 2397 sanctions against the Democratic People's Republic of Korea. In addition to the three staff officers embedded within the Enforcement Coordination Centre on United States Ship (USS) Blue Ridge, the CAF contributed HMCS *Winnipeg* and a CP-140 Aurora aircraft for eight weeks on Operation NEON. They observed over 300 vessels, including approximately 100 ship to ship transfers (13 observed by frigate, the remainder by CP-140 aircraft). Evidence collected by CAF assets supported Global Affairs Canada-led diplomatic efforts to tackle UNSCR 2397 sanctions-evasion

activity for sanctions currently imposed against the Democratic People's Republic of Korea for their illicit Weapons of Mass Destruction program.

- **Operation OPEN SPIRIT^{lxxii}**: The annual and collaborative operation between Canada, Latvia, Lithuania, and Estonia with an aim to clear explosive remnants of war in the Baltic Sea was deferred due to the travel restrictions from COVID-19 for FY 2020-21.
- **Operation PROJECTION^{lxxiii}**: Includes both Operation PROJECTION (Indo-Asia Pacific) and Operation PROJECTION (Africa) and is the CAF naval forward presence operation that contributes to global and regional stability, enhances regional partnerships, and promotes Canada as a reliable and credible regional partner. Through multilateral partnerships, the CAF promoted the Rules Based International Order and international law while enabling Government of Canada defence diplomacy throughout each region.
 - Upon completion of Exercise Rim of the Pacific (RIMPAC), HMCS *Winnipeg* transitioned to Operation PROJECTION (Indo-Asia Pacific) until December 2020, which included an Operation NEON window, a South China Sea presence, and the conducting of Exercise KEEN SWORD to increase allied interoperability between Canada, United States Forces, and Japan Self-Defence Forces;
 - HMCS *Calgary* conducted a South China Sea presence late in the period covered by this report; and
 - Operation PROJECTION West Africa was executed to a high degree of effectiveness notwithstanding challenges imposed by COVID-19 namely, the gravity of its effect on interfacing with partner nations. Operation PROJECTION Africa was paused in 2021 due to COVID-19 restrictions, which precluded a viable community relations/diplomatic shore program.
- **Operation PROTEUS^{lxxiv}**: Canada's contribution to the Office of the United States Security Coordinator (USSC). During FY 2020-21, CAF members continued to serve with the USSC team as part of Canada's military task force in Jerusalem. CAF members on Operation PROTEUS filled key USSC positions and were integral team members. Task Force Jerusalem aims to contribute to regional stability and the furtherance of the Middle East Peace Process by:
 - Demonstrating Canada's support for the Palestinian people;
 - Facilitating security coordination between the Israeli Defence Force and the Palestinian Authority Security Forces; and
 - Contributing to the professionalization of the Palestinian Authority Security Forces through institutionally-focussed reform activities.
- **Operation REASSURANCE^{lxxv}**: The CAF's enduring contribution to the NATO assurance and deterrence mission in Central and Eastern Europe. FY 2020-21 highlights include:
 - Operation REASSURANCE Land Task-Force: Canada, through the CA continued its contribution to NATO's enhanced Forward Presence (eFP) Battle Group in Adazi, Latvia, as the Framework Nation. Noteworthy accomplishments included Canadian validation of two Multinational Battle Groups in theatre. Furthermore, Canada continued work on the Multi-National Headquarters project;
 - Operation REASSURANCE Maritime Task-Force: The RCN continued to contribute warships on a persistent rotational basis to NATO, including HMCS *Fredericton* (January-July 2020), HMCS *Toronto* (July-December 2020), and HMCS *Halifax* (January-July 2021). In January 2021, the CAF assumed command of Standing NATO Maritime Group One from his Flagship HMCS *Halifax*; and
 - Operation REASSURANCE Air Task-Force: The RCAF provided intermittent fighter aircraft support in Romania. Training events and exercises included BLUE BRIDGE, ALLIED SENTRY, THRACIAN VIPER, ADEX with HMS DRAGON and USS DONALD COOK. Of

note, Five Air Task-Force – Romania members were awarded the Romanian Air Force Emblem of Honour. During FY 2020-21, 479.8 hours were flown through 291 sorties conducted over 70 days.

Operation REASSURANCE

A Canadian Light Armoured Vehicle 6.0 manoeuvres alongside a Polish tank during Exercise WOLVERINE STRIKE, an Operation REASSURANCE eFP Battle Group training event in Latvia in March 2021.



(Photo credit: Subteniente Juan Delgado Garnacho)

- **Operation UNIFIER**^{lxxvi}: The CAF mission to provide military training and capacity building to the Security Forces of Ukraine personnel to support Ukraine's efforts to maintain sovereignty, security and stability. Under the rubric of the Multinational Joint Commission, Operation UNIFIER focuses on combined arms training at battalion and brigade levels and on individual training and personnel military education with a focus on junior officers and Non-Commissioned Officer development. This consists of mentoring Ukrainian Observer Controller Trainers in Combat Training Centres, coaching or training Security Forces of Ukraine trainers in marksmanship, reconnaissance, tactical movement, explosive threat recognition, communication, combat survival, and on developing basic and advanced leadership and ethics courseware in support of officer and Non-Commissioned Officer academies. In addition, naval training components included operational planning, navigation and Officer of the Watch, damage control/ fire-fighting and diving. As a result of COVID-19, a reduced contingent of 60 CAF members was deployed to Ukraine in April 2020. In June 2020, additional CAF personnel were deployed to augment the Joint Task Force – UKRAINE (JTF-U) contingent to 150 members. Finally, back to a full strength of 200 CAF members in November 2020, JTF-U was able to accompany the Security Forces of Ukraine in gradual resumption of training activities and to pursue its mission in Ukraine while following strict health and safety protection and prevention measures against COVID-19.
 - The CAF provided training to 758 members of the National Guard of Ukraine and 5 681 members of the Armed Forces of Ukraine through 90 course serials;
 - The CAF has trained more than 24 535 Security Forces of Ukraine candidates (total as of 31 March 2021) via 510 course serials spanning all domains of activity since the start of the mission in September 2015; and
 - Defence worked in close collaboration with Global Affairs Canada on strategic level initiatives that support Ukraine at the institutional level. These initiatives will supplement the tactical-level training and capacity building provided by the CAF under Operation UNIFIER. DND and the CAF will continue to develop international engagements with a view to advancing Canada's broader foreign and defence policy objectives to achieve a more peaceful and stable world.

CAF chaplains deployed on Operation REASSURANCE and Operation UNIFIER utilized their Religious Leader Engagement training to establish relationships with Indigenous religious and community leaders. This enhanced positive host nation-CAF ties, increased CAF member resilience, and facilitated local humanitarian efforts in accordance with “Called to Serve (2020-2030), The Royal Canadian Chaplain Service Spiritual Resilience and Well-Being Strategy.”

The CAF continued to play an important role in United Nations peacekeeping by contributing to broader government objectives and whole-of-government efforts to prevent conflict, stabilize fragile situations and combat threats.

- **Operation PRESENCE^{lxxvii}**: The CAF’s contribution to the United Nations Mission in Mali, and a Tactical Airlift Detachment in Entebbe, Uganda. Operation PRESENCE is part of the Government of Canada’s peace operations strategy, which includes the commitment of high-value military capabilities to United Nations peacekeeping missions.

In July 2020, the CAF received the authority to extend by 12 months its episodic support to United Nations Peacekeeping operations in Africa for a second year under Operation PRESENCE (Uganda).

The CAF provided episodic airlift support based out of Entebbe, Uganda, and Goma, Democratic Republic of the Congo, to the United Nations Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO). The Tactical Airlift Detachment consisted of one CC-130J Hercules aircraft, operated and supported by 27 CAF members. Multiple sorties were flown throughout FY 2020-21 into Entebbe, Uganda, to assist with transporting troops, equipment and supplies to MONUSCO and to the UN Mission in South Sudan (UNMISS). The size and scope of the deployed force was limited due to COVID-19. The CAF also contributed a five-person Task Force to the United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) Headquarters in Bamako and assigned two Canadian Army personnel to support the UK Long Range Reconnaissance Group based in Gao.

- **Operation CROCODILE^{lxxviii}**: A second Canadian mission in support of MONUSCO. Currently, nine CAF members are deployed. They serve in two locations in the Democratic Republic of the Congo with one element is in MONUSCO headquarters in Kinshasa, and the second at headquarters in Goma. These CAF members are experts in military operations, liaison, and training. They support the MONUSCO mandate, which includes:
 - Protecting civilians;
 - Working with the local government and international agencies to help the Congolese government improve justice and security;
 - Monitoring an arms ban; and
 - Providing logistical support to assist in national and local elections.
- **Operation SNOWGOOSE^{lxxix}**: The CAF contribution to the United Nations Peacekeeping Force in Cyprus. It is one of Canada’s longest-running missions in another country. It dates from the beginning of United Nations Peacekeeping Force in Cyprus in 1964. The CAF now sends one officer to support the operations staff at the United Nations Peacekeeping Force in Cyprus headquarters in Nicosia on a yearly rotational basis.
- **Operation SOPRANO^{lxxx}**: The CAF’s engagement in the UNMISS. UNMISS was established on July 9, 2011. It was formed under United Nations Security Council Resolution 1996 (2011). The CAF supported this mission by sending 10 personnel.
- **Operation JADE^{lxxxi}**: Canada’s contribution to the United Nations Truce Supervision Organization. Operation JADE is Canada’s longest-running overseas commitment. The first CAF members to serve with United Nations Truce Supervision Organization were sent in 1954. There are four officers deployed on Operation JADE in the Golan Heights, Lebanon and periodically in Syria. They serve as United Nations Military Observers. A senior CAF officer also joins the task force when

requested by the United Nations. That officer serves in one of several leadership positions in the region.

- **Elsie Initiative**^{lxxxii}: Delays in the completion of the barrier assessment for the Ghanaian Armed Forces (GAF) continued throughout most of the reporting period; the barrier assessment process identifies the prevalence of specific barriers to uniformed women's participation in peace support operations. Advance results from the GAF's barrier assessment were received by the Government of Canada in December 2020. The results were analysed to determine potential options that could be developed in order to address the key barriers facing women in the GAF identified in the report. Although it was initially envisioned that CAF would provide train and assist teams to deliver "hands and feet" training to GAF, the nature of the identified deficiencies did not lend themselves to this sort of training. Key gaps identified in the context of the GAF were more in the policy and gender mainstreaming areas (i.e. cultural and structural barriers). Planning continues in order to identify the appropriate mechanism and activities for bilateral assistance to GAF to address these gaps. Engagements with GAF are being conducted to inform the development and prioritization of potential training activities. CAF has also undertaken an internal barrier assessment process, for which data collection was conducted in the reporting period. The final results of CAF's barrier assessment are expected in fall 2021.

In accordance with the United Nations' Uniformed Gender Parity Strategy 2018-2028, the United Nations has set a target of 25 percent female representation in the United Nations Military Observer and Staff Officer positions by 2028. This will be achieved by increasing the percentage of women on United Nations missions in these roles by one percent each year. The CAF achieved the targeted 17 percent for FY 2020-21.

As a result of COVID-19 and in consultation with Bangladesh, the handover of the Chair of the Women, Peace and Security (WPS) Chiefs of Defence (CHODs) Network was delayed until later in 2021. The second year as Chair allowed the Chief of Defence Staff to further the work initiated in 2019 in strengthening the network.

The WPS CHODs Network that was created in 2017 by the United Kingdom, Canada, and Bangladesh, is to provide a collaborative platform for the CHODs who have committed to advancing the WPS agenda within their defence force. The Network supports members' efforts to build internal capacity and expertise. By sharing experiences, lessons learned and best practices, members will enhance their shared understanding and knowledge, thereby increasing their ability to move the WPS agenda forward within their own defence force. DND and the CAF's focus has been on strengthening and formalizing the Network, expanding its membership, and increasing awareness and nations' commitment to advance the WPS agenda. To date, we have made significant progress towards achieving these goals, through the following activities in FY 2020-21:

- The membership of the WPS CHODs Network has grown to 56 nations and continues to receive positive responses from the more than 40 additional nations we have invited to join;
- A WPS CHODs Network Charter was developed and distributed to all member nations to formalize and strengthen the commitment of member nations to the implementation of the tenets of the WPS agenda. It will record nation's pledges and provide an opportunity for yearly updates on progress during annual meetings; and
- DND and the CAF published a digital and portable training package to be made available to all United Nations countries in the spring of 2021 in order to increase awareness and capacity to include gender perspectives in military operations plans and missions.

Following the crash of Ukrainian Flight PS752 in Iran, DND contributed significantly to the analysis conducted by the government forensic team, which provided an assessment of the factors and events that led to the tragedy.

DND and the CAF, working closely with its Five Eyes Partners, also delivered authoritative products and assessments as the COVID-19 pandemic evolved. These timely products provided situational awareness in support of senior leadership decision-making, planning and conduct of CAF activities.

In addition to the major operations delivered in FY 2020-21 noted under each Departmental Result, a number of key achievements marked the FY with regard to improving operational capabilities in Defence.

For example, in response to the commitment to develop a Global Integration capability to advance the CAF's pan-domain understanding of the operating environment, the following results were achieved during FY 2020-21:

- Joint Intelligence, Space, and Cyber briefing integrated into regular Command activity in order to synchronize current and future operations;
- Improving Comprehensive Preparation of the Operational Environment estimates through better integration of cyber, space and information domain estimates; and
- The CAF is on track to leverage space, cyber, and information domain capabilities to close intelligence gaps as these domains mature.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
1.5 Canadian Armed Forces contribute to a more stable and peaceful world	% of international operations that meet stated objectives	100%	31 March 2021	93%	98%	95%*
	Extent to which the Canadian Armed Forces is effective in international operations	The Canadian Armed Forces is effective in the conduct of international operations	31 March 2021	Not Available New qualitative indicator as of 2019-20	This is a qualitative indicator**	This is a qualitative indicator***

Notes:

* Canada, in collaboration with our allies, regional partners and other Canadian government departments, continued to detect, confront and defeat trans-regional threats, including those from violent extremist organizations, before they reached our borders. This included multiple regional capacity-building initiatives with partners around the globe. The remaining 5% accounts for known capability deficiencies that prevent the CAF from fully achieving objectives. Further, due to the COVID-19 global pandemic and the high priority placed on the safety of Canadian soldiers working abroad, measures were taken to ensure their personal safety, including in some cases, repatriation. These safety measures contributed to the less than 100% target completion for the FY.

** This is a qualitative indicator and results are described as successes and challenges throughout Departmental Results 1.5 of the [2019-20 Departmental Results Report](#)^{lxviii}.

*** The Canadian Armed Forces continued to provide effects across the globe, enabling coalition and partner capacity building at the tactical, operational and strategic levels. Work to synchronize assets and effects includes the capability to generate targeted effects within the information domain and integrating cyber enabled effects in CAF-led operations.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{lxix}.

Budgetary financial resources (dollars)

2020–21 Main Estimates	2020–21 Planned spending	2020–21 Total authorities available for use	2020–21 Actual spending (authorities used)	2020–21 Difference (Actual spending minus Planned spending)
1,075,628,685	1,080,817,402	1,342,474,789	1,028,857,684	(51,959,718)

Human resources (full-time equivalents)

2020–21 Planned full-time equivalents	2020–21 Actual full-time equivalents	2020–21 Difference (Actual full-time equivalents minus Planned full-time equivalents)

2,860	2,156	(704)
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Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{xxxxv}.

Ready Forces

Description

Field combat ready forces able to succeed in an unpredictable and complex security environment in the conduct of concurrent operations associated with all mandated missions.

Results

The Canadian Armed Forces (CAF) participated in a number of major exercises that contributed to CAF readiness to meet the missions as set out in *Strong, Secure, Engaged: Canada's Defence Policy* (SSE).

In particular, Exercise VIGILANT SHIELD 2021 - Defence of North America crisis planning exercise - was focused on SSE missions one and two:

- Detect, deter and defend against threats to or attacks on Canada; and
- Detect, deter and defend against threats to or attacks on North America in partnership with the United States, including through North American Aerospace Defense Command (NORAD).

Exercise INTERNAL LOOK 2021 – a coalition exercise designed to inform operational headquarters warfighting processes in response to a crisis in the Middle East – was focused on SSE Mission 3:

- Lead and/or contribute forces to North Atlantic Treaty Organization (NATO) and coalition efforts to deter and defeat adversaries, including terrorists, to support global stability.

NORAD regularly conducted exercises with a variety of scenarios, from airspace restriction violations to responses to unknown aircraft. These exercises provided the opportunity to develop an assortment of skills including ensuring interoperability among Canadian and American aircraft. To enhance NORAD's ability to operate in the Arctic, a number of CAF and United States Air Force aircraft conducted exercise flights over sparsely populated Arctic areas and operated from forward operating locations in Canada's Arctic.

Defence Research and Development Canada (DRDC) Suffield Research Centre personnel have provided essential support to continued CAF operations throughout the pandemic, including Maritime Forces Pacific operations and Exercises MAPLE RESOLVE, AGILE RAM I/II, and others, by processing the majority of their COVID-19 tests.

To enable new and ongoing domestic and international CAF operations DRDC Suffield validated sample collection methods, which included processing approximately 2 500 sample tests, and then ramped up capacity to generate results in less than 24 hours to support command decisions. Within three months, DRDC Suffield implemented a rapid testing capability that allowed them to transition from processing 10 to 20 samples per day to 100s of samples per day.

Gender-based analysis plus (GBA Plus)

The Department of National Defence (DND) and the CAF have continued to make progress in the development and delivery of GBA Plus related training by increasing the number of experts available to support the internal organizations, develop tools, provide relevant data sources, and share examples of past related analysis. Progress was affected by COVID-19 as a result of the Public Health Measures limiting in-person learning and the Defence Team is now using virtual tools to deliver training and assistance. We are continuing to work with partners and allies to have them assist us in terms of capacity and expertise. In FY 2020-21:

- The integration of GBA Plus and Women, Peace and Security (WPS) agenda content into courses and processes continues to improve the skillset of DND and CAF personnel in order to support both institutional requirements as well as deployed operations, both domestic and international;
- The Royal Canadian Navy (RCN) launched their Leadership, Respect, and Honour within sailor's core trade qualifications, from initial RCN training through to Commanding Officer, which includes

topics on [Operation HONOUR](#)^{lxxxvi}, Hateful Conduct, and the RCN Code of Conduct, promoting diversity and identifying cultural biases. These discussions help prepare sailors to become effective leaders, build a more inclusive workplace and fully support members who may experience incidents of hate, barriers, and harmful or inappropriate sexual behaviour within the RCN. Training at each level is designed for a sailor progressing from junior subordinate with bystander training, to supervisor, indicating how to appropriately manage incidents with Commanding Officers by fostering an inclusive and safe environment within their unit;

- A complementary, but not exclusively GBA Plus driven, initiative was the launching of the Canadian Army's (CA) new order regarding Hateful Conduct that clarifies key terms, the expectations of the Commander, and responses that leaders should take in response to incidents. The policy was introduced with a two-pronged approach: online training was combined with a cascading series of discussion forums;
- The Royal Canadian Air Force (RCAF) released Air Force Order 5000-8 Hateful Conduct, acknowledging that there are biases built into our systems and policies. The RCAF's goal is to ensure everyone on the RCAF team, civilian and military, have an opportunity to thrive and reach their full potential in a diverse, inclusive and respectful environment. To that end, the training authority within RCAF began development of a new Performance Objective 404 "Establish a positive unit culture" which will be added to the Qualification Standard for all RCAF professional development courses. Additionally, the RCAF drafted an Employment Equity, Diversity and Inclusion action plan that directs subordinate units to employ a GBA Plus lens as standard practice and track the number of members who have completed mandated online GBA Plus courses; and
- Extensive training was developed to raise awareness of responsibilities regarding the WPS agenda and gender equality. All deploying personnel complete GBA Plus online training. Additionally, Employment Equity courses, the prevention and response to Sexual Exploitation and Abuse, and Conflict Related Sexual Violence training are undertaken when applicable to operational deployment.

Experimentation

The Canadian Joint Warfare Centre continued to serve as national lead and coordination office for the Joint Arctic Experimentation series, and the United States Joint Staff led Bold Quest series. The Canadian contribution to Bold Quest was conducted from Canadian Force Base (CFB) Cold Lake, Alberta, while connected over the Bold Quest Mission Network to our international partners. Two Responsive Limited Experiments (RLX) focused on a Joint Intelligence Surveillance Reconnaissance (JISR) planning application, "Total Perception" from Larus Technologies. The first experiment was conducted in the Joint Battle Labs to assess the application on an experimental network, while the second was conducted remotely, due to COVID-19 restrictions, in order to determine the feasibility of the application to respond to a rapid JISR scenario.

Planning and coordination for RLX – SitaWare, an assessment of Systematic Inc.'s Common Operating Picture and Situational Awareness tool, was undertaken for execution in 2021. A DND/CAF team provided scientific leadership and advice to the RLX experimentations.

Additional Defence-related experimentation activities are outlined in this report under [Core Responsibility 4 – Future Force Design](#).

Key Corporate Risk(s)

There are many risks associated with the Ready Forces Core Responsibility. Two of the Key Corporate Risks directly associated with operations are described below:

Military Competencies – There is a risk that DND and the CAF will not have the right military personnel, with the right competencies, at the right place and at the right time to support operations.

Materiel Maintenance – There is a risk that DND and the CAF may have difficulty maintaining its materiel capabilities at the right level to support operations.

The risks above can affect the department's ability to achieve the Departmental Results for the Ready Forces Core Responsibility.

As the Defence Departmental Results Framework reflects a chain of delivery from the conceiving of the required armed forces, to developing them and then executing operations, the activities to mitigate the risks to the Ready Forces Core Responsibility can also be found in other Core Responsibilities that deliver building blocks that enable the results of Ready Forces.

Many of the preventative and mitigating controls for these risks are described as activities of each Departmental Result below.

Departmental Result 2.1 – Canadian Armed Forces are ready to conduct concurrent operations

The CAF generated and sustained high readiness naval, land, air, space, cyber and special operations forces and joint capabilities to meet Force Posture and Readiness levels directed by the Chief of the Defence Staff and the concurrent mission requirements of SSE. Throughout FY 2020-21, the CAF progressed a number of initiatives to improve readiness, including:

- **Operation NANOOK^{xxxxvii}**: Exercises took place, ensuring a continued presence in the North and enhancing surveillance and control in the Arctic region, although reduced in scope to protect vulnerable isolated northern communities. Please see the operations section of this report for more information regarding Operation NANOOK;

Operation NANOOK-NUNALIVUT

Soldiers from the Second Royal Newfoundland Regiment board a CH-147F Chinook helicopter in Yellowknife, Northwest Territories during the field portion of Operation NANOOK-NUNALIVUT in March 2021.



(Photo credit: Corporal Tori Lake)

- **Exercise TRADEWINDS**: Exercise TRADEWINDS 20, which aims to enhance the collective ability of defence forces and law enforcement to counter transnational criminal organization and conduct of humanitarian assistance and disaster relief operations. This exercise was cancelled by United States Southern Command due to COVID-19 travel restrictions;

- Exercise JOINTEX: Due to COVID-19 restrictions, JOINTEX 20 and Joint Operations Symposium 21 were redesigned and re-scheduled to FY 2021-22, to deliver a virtual webinar series in coordination with the Canadian Forces College. The aim will be to deliver advanced and senior leadership events that focus on how the Canadian National Security Enterprise must adapt in addressing pan-domain challenges to national security. Specifically, discussions will be focused on the need to develop an integrated approach to defending Canada's North by integrating military effects into a broader national effort to strengthen deterrence;
- Exercise RIMPAC: Due to COVID-19, Commander United States Indo-Pacific Command and Commander US Third Fleet scaled back the scope of RIMPAC 20 to naval-specific activities. The usual multi-national shore-based Combined Task Force, Maritime Component Command, and Air Component Command staffs ashore, visiting air forces, and the traditional harbour phase did not occur. While the exercise was significantly re-scoped, notable effort was invested by the United States Navy and all partners to preserve both training and engagement value;
- Exercise VIGILANT SHIELD 21: Due to the impacts of COVID-19, the exercise was changed. The Crisis Planning phase focused solely on defence of North America and the Command Post Exercise was cancelled. Nevertheless, the exercise provided another excellent opportunity to examine the Canadian Joint Operation Command's ability and readiness to plan and command military operations as part of Tri-Command with US partners (NORAD and NORTHCOM).

Furthermore, the Canadian Joint Warfare Centre completed Arctic simulations under Exercise VIGILANT SHIELD 21. These wargames were designed and developed over FY 2020-21, each customized to address key problem statements provided by the respective organization. The wargame designs moved away from the traditional table top using paper maps and customized counters to computer assisted programs;

- Exercise MAPLE RESOLVE 20: As the premier Canadian Army (CA) training event of the fiscal year, this exercise validates named and contingency readiness elements using live simulation in a force-on-force exercise. During the exercise, approximately 4 000 soldiers test their abilities to integrate with joint capabilities, including air power and 1 Canadian Division Headquarters, and allies. It is delivered within a whole-of-government approach that includes non-governmental organizations, while operating within a realistic, complex and challenging combat environment. The exercise, designed and developed by the Canadian Manoeuvre Training Centre, provides CA leaders, soldiers, other CAF personnel and allies with a unique opportunity to validate their combat readiness to support concurrent operations. In March 2020, due in part to uncertainty that was present at the start of the pandemic, conducting a major training event was deemed high-risk and a proactive decision was made to cancel this event. Instead, CA personnel required training objectives were met in other ways, such as through the use of computer-assisted simulation training, distributed training, and postponing some requirements to later dates; and
- Exercise UNIFIED RESOLVE 21: The largest CA computer-assisted simulation exercise validated the headquarters of multiple army organizations in a joint and combined environment as elements of Canada's named and contingency readiness commitments. Through the use of simulation, a challenging computer-assisted exercise tests planning and decision-making at multiple levels of CA leadership in a controlled, virtual environment. An enduring exercise, Exercise UNIFIED RESOLVE, is internationally recognized and participation in this event is sought out by allies for both its quality and training value. The exercise, designed and developed by the Canadian Manoeuvre Training Centre, provides CAF personnel and allies an opportunity to enhance collective competence and interoperability across a spectrum of scenarios. In order to respect public safety requirements, this exercise was adapted in 2021 by, for example, increasing the use of remote work in order to reduce travel requirements and by changing the tempo of the exercise to further limit the number of support personnel. As a result of these measures, there were no positive cases of COVID-19 among exercise participants and no cases of transmission to their communities.

To ensure NORAD is prepared to execute its assigned missions (Aerospace Warning, Aerospace Control and Maritime Warning), NORAD plans, executes and assesses individual training, group training and

exercises to achieve and validate mission readiness. The AMALGAM (ARROW, DART, DRAGON and INDIGO) exercise series is designed, built and executed to provide continuation training for NORAD personnel and assessor authorities for NORAD leadership.

Due to COVID-19, the CAF participation in planned joint and combined exercises was severely curtailed as follows:

- **SCHRIEVER WARGAMES 20:** For the first time, the Schriever Wargames was led by the United States Space Force. As one of the eight nations represented at the Wargames, the CAF participated in the two-day space training event. The Wargames explores critical space issues to include investigating the use of new space systems, identifying solutions to common challenges in the space domain and advancing space support doctrine. Future coalition wargames, set five to 30 years in the future, intended to examine future architectures and identify responses to global events. This exercise was significantly reduced in scope due to COVID-19 but will resume in strength in the next iteration;
- **AMALGAM DART:** Despite the challenges faced by COVID-19, NORAD continued to test responses, systems and equipment. Exercise AMALGAM DART is a week-long air defence exercise that includes a variety of Royal Canadian Air Force (RCAF) and United States Air Force aircraft operating from northern locations including Whitehorse, Yukon; Yellowknife, Northwest Territories; Iqaluit, Nunavut; Goose Bay, Newfoundland and Labrador; and Thule, Greenland;
- **GLOBAL LIGHTNING 20:** This United States Space Command-led exercise is designed with Five Eyes Partners and includes Director-General level international contact points. During this session, Director-General Space and US Space Force also conducted electromagnetic spectrum training opportunities with 22 Wing in North Bay, Ontario;
- **THRACIAN VIPER 20:** This recurring flying training deployment was conducted between the United States Air Force and the Bulgarian Air Force, and aims to develop and maintain interoperability with Bulgarian partner forces. CF-18 Hornet aircraft assets participated while deployed in support of Operation REASSURANCE; and
- **COALITION VIRTUAL FLAG:** This annual, Headquarters United States Air Force sponsored and 705th Combat Training Squadron executed coalition exercise is designed to provide operational and tactical warfighter training in a synthetic theatre-level, major combat operations, contested, degraded and operationally limited environment. It was executed from six Canadian sites along with a small contingent deployed to the United States.

The CAF did not participate in the following planned joint and combined exercises due to the COVID-19 pandemic and international travel restrictions:

- **NORTHERN VIKING 20:** A bi-lateral exercise between Iceland and the United States, along with 11 partner and allied countries, which aims to increase the readiness of the forces involved and their inter-operability. The exercise was planned for April 2020;
- **JOINT WARRIOR 20 (NATO):** A United Kingdom-led multinational exercise in the Atlantic Ocean to address the full spectrum of maritime and joint warfare mission areas. The exercise scenarios focused on maritime security and included small boat attacks, boarding operations, air defense, and anti-submarine warfare tactics;
- **RED FLAG ALASKA:** RED FLAG-Alaska, a series of Pacific Air Forces commander-directed field training exercises for United States Forces and some allies, provides joint offensive counter-air, interdiction, close air support, and large force employment training in a simulated combat environment; and
- **GLOBAL THUNDER:** This annual command and control exercise is designed to train the United States Strategic Command forces and assess joint operation readiness. The United States Strategic Command and participating allies' mission is to deter, detect and prevent strategic attack against the United States and our allies. The CAF did not participate due to the COVID-19 pandemic and international travel restrictions.

DND established a Joint Operations Fusion Laboratory within the Canadian Joint Warfare Centre in August 2020. The Joint Operations Fusion Lab aims to design, test and experiment with new and emerging technologies and data curation approaches in order to increase capabilities for Command, Control Communications, Computers, Intelligence and Reconnaissance (C4ISR). The Lab will ensure interoperability of C4ISR networks with allies, working closely with their C4ISR projects to ensure data compatibility and network interoperability.

The North Warning System is essential to the aerospace defence of Canada and the United States; as such, the maintenance of its infrastructure is critical. All 50 Canadian North Warning System sites were remotely monitored at 22 Wing North Bay, Ontario. Preventive and corrective maintenance was however conducted on site. With extensive knowledge and proficiency with working in the Arctic, several Inuit-owned companies supported the North Warning System maintenance efforts.

The department continued to assess continental defence opportunities for closer collaboration with Canadian Joint Operations Command (CJOC) and NORAD in order to enhance preparedness and modified processes and employment models for adaptation to the evolving threat environment. In support of this, the CAF continuously monitored and assessed cyber threats to DND and the CAF's IT systems in order to address areas of concern and inform key leadership of high-impact cyber events.

The department continued to work collaboratively with both Shared Services Canada and the Canadian Centre for Cyber Security to maintain cyber superiority across all operations including ongoing discussions on shared workspaces and exchanges to enhance collaboration.

The department actively engaged with partner training, especially with the national authority for cyber security, the Communications Security Establishment. Additionally, with part-time and full-time military members, DND participated in numerous allied cyber exercises to enhance technical skills and build and maintain strong relationships with allies. DND and the CAF actively engaged with the Communications Security Establishment in several CAF cyber training activities for the purpose of preparing to defend Canada, the continent and international interests from cyber threats.

DND and the CAF's IT infrastructure is a key requirement to delivering efficient and effective Cyber Operator training and support to cyber training exercises. The Collaborative Security Test Environment / Interim Cyber Training Capability is currently in use as an interim solution for the CAF's cyber immersive training environment.

- **CYBER FLAG 20:** This exercise was held as a virtual cyber training exercise conducted in June 2020 in various locations around the National Capital Region and across Eastern Canada. DND and the CAF Training Objectives were to:
 - Conduct Defensive Cyber Operations with Cyber Operators and Cyber Reservists; and
 - Employ cyber talent from all levels and expertise to ensure cross training by resident experts for relative newcomers to cyber operations.
- **CYBER COALITION 20:** The intent of this exercise is to enhance cooperation among NATO members, allied nations, and partners to strengthen the alliance's ability to deter, defend against and counter threats in and through cyberspace. Coordination includes exercising collaboration and cyberspace operations in support of NATO's core tasks and providing input to NATO transformation. CYBER COALITION 20 was conducted virtually, adhering to all DND and the CAF's COVID-19 safeguards.
- **Multinational Integrated Cyber Fusion Project 2019-20:** The aim of this project was to address the lack of cyber threat information sharing inside a multinational force. Allies and partners from the United States, Poland, United Kingdom, Switzerland, Finland, and the European Union participated in the project.

Testing and fielding of the Canadian Space Operations interoperable C2 system was delayed due to resourcing issues as well as the impact of COVID-19.

- Advanced the integration of our space-based capabilities. With the [RADARSAT Constellation Mission](#)^{lxxxviii} satellites becoming operational, the CAF will be able to share and leverage satellite

imagery, as well as ship identification capabilities, with other government departments and Canada's allies. The security of the RADARSAT Constellation Mission networks is of paramount importance and is continually fine-tuned by incorporating the latest protective measures. The CAF is striving towards automating processes that can highlight changes and differences between satellite images in order to reduce the work load for human analysts.

New ships mean improvements in quality of life at sea

The Northern lights grace the sky above Her Majesty's Canadian Ships (HMCS) *Harry DeWolf* during its recent ice trials off Labrador and Newfoundland.



The CA is a soldier-centric, professional and integrated force made up of our Regular Force personnel, Primary Reserve Force, Canadian Rangers and civilians. Throughout FY 2020-21, the CA generated combat-effective, multi-purpose land forces for deployment in multiple concurrent operations to achieve Canada's defence objectives.

- The CA Managed Readiness Plan was adapted in FY 2020-21 to be able to simultaneously conduct deployed operations, while keeping designated ready land forces in readiness to respond to NATO requirements, maintaining our commitment to respond to domestic requirements. CA isolation guidelines, strict remote work policy/posture, and reporting across all levels led to ongoing readiness.
- To ensure that it remained poised to respond to domestic requests for assistance approved by the federal government to aid provincial and municipal governments, the CA also trained and prepared Immediate Reaction Units and Arctic Response Company Groups that are strategically located throughout Canada.

FY 2020-21 saw the CA training a brigade group (approximately 5 000 personnel) to be ready to meet contingency requirements for NATO.

Operation LASER

Canadian Rangers deliver first aid kits prepared by the Guardian Angels of Gros-Mecatina (La Tabatiere and Mutton Bay) to those in need as part of Operation LASER.



(Photo credit: Ranger Corporal Karen Gallichon)

- Group and Individual training has been adapted to respect all public health measures to prevent the spread of COVID-19. An example of this was the successful training of a light infantry battalion group (600 soldiers) along with an American brigade in the United States.
- Following a pause in spring 2020, a controlled and deliberate re-start of individual training was undertaken. The pause in CAF recruitment made it possible for CA training establishments to train soldiers who were held in waiting during the pause and to subsequently resume training. Training was prioritized to ensure that force generation and resource allocation requirements were met. A significant backlog of untrained personnel, especially Primary Reservists, still exists as training throughput was scaled back to respect public health measures. As public health measures often differed between and even within provinces, different approaches had to be taken at various CA training centres.
- Through the CA Modernization Strategy, the CA will evolve to prepare for present and future threats and challenges in alignment with Canada's defence policy. The publication of the strategy, a five-year horizon document, in early 2021 started a deliberate planning process to increase operational outputs. For example, closer integration of the Primary Reserve Force with the Regular Force will contribute to additional capability. The Modernization Strategy also provided guidance on how the CA will embrace digitization. As part of this, FY 2020-21 saw the creation of an analytics support centre and further alignment of data policies with the departmental strategy.
- Force 2025 is the CA's initiative to review all components of the CA and seek to optimize and modernize its structures to meet current and projected operational requirements as well as support SSE initiatives. One of the objectives of Force 2025 is to continue the integration of the Primary Reserve Force, Canadian Rangers, civilians and the Regular Force into a single, integrated team. Increased integration enhances command and control relationships and training opportunities, and clarifies assigned tasks and integration points, ensuring that the CA is prepared to carry out assigned tasks and support concurrent operations. This will be achieved, in part, through efforts to: refine attraction, recruiting, and retention initiatives; implement policies that enable the operational capability of Reserve Force personnel while ensuring that administration is streamlined; and continue developing and integrating Reserve Mission Tasks to build capacity and depth. During

FY 2020-21, Force 2025 included analysis of the existing force structure and consultation with a broad range of stakeholders;

- To further support CA readiness and defence policy objectives, the CA fine-tunes its ability to force generation of land power by improving cooperation and interoperability with allied nations. With restrictions on travel, in FY 2020-21, the CA leveraged technology to participate in the following events:
 - America, Britain, Canada, Australia, and New Zealand (ABCANZ) Armies Programme: This conference was held virtually in 2020. The CA recognizes this program as the main effort for interoperability development, aimed at integrating the various partnered nation command and control capabilities;
 - Indo-Pacific Armies Chiefs Conference: This biennial multinational military conference was held virtually in 2020, providing a forum for regional Army Chiefs of the Indo-Asia-Pacific Theatre to exchange views, establish and enhance relationships, and foster security cooperation;
 - Association of the United States Army Land Forces Pacific Symposium: This conference was cancelled in 2020. This is an annual symposium designed to highlight the role of land forces in the Indo-Asia-Pacific Theatre, and enhance security dialogue and cooperation among senior Indo-Asia-Pacific military leaders and key security partners;
 - Conference of Commanders of American Armies: This biennial multinational military conference was held virtually in 2020. It provides a forum for the regional Army Chiefs and promotes security dialogue and cooperation among the senior Latin American Army Commanders and key regional security partners with vested interests in the region; and
 - Army staff talks led by the Deputy Commander of the CA and his counterparts in the United States Army, British Army, Australian Army, New Zealand Army and Chilean Army took place virtually. These staff talks facilitated dialogue, coordinated collective efforts, shared best practices and cultivated bilateral/multilateral training opportunities of key importance.
- The CA's contributions to joint capabilities – the Joint Counter Explosive Threat Task Force, the Joint Chemical, Biological, Radiological and Nuclear Defence, and Joint Targeting Training functions – were impacted by the global pandemic. With extremely technical skillsets that require frequent engagement with global partners, almost half of the training events for these capabilities were cancelled due to COVID-19. This included the cancellation of Exercise PRECISE RESPONSE 21, a live agent and interoperability training exercise conducted on behalf of NATO with DRDC at Canadian Forces Base Suffield, Alberta; as well as three serials of the Joint Targeting course and two serials of the Collateral Damage Estimation course. In FY 2020-21, efforts were focused on:
 - Renewal of equipment and training standards in order to maximize the efficiency of training; and
 - Development of a multi-year plan to increase training over the next two fiscal years in order to mitigate the impacts of the pandemic.

Canada took delivery of HMCS *Harry DeWolf* in July 2020, the Royal Canadian Navy assumed Care and Custody of the ship as the final stages of systems' installation progressed for the first ten weeks of the ship being berthed at HMC Dockyard. The ship sailed under RCN command for the first time in October 2020, executing a comprehensive test and trials program, developing crew proficiency in operating the First of Class and performing the core task of providing Maritime Situational Awareness in Canadian waters.

- In February 2021, HMCS *Harry DeWolf* deployed to the Canadian Arctic to execute an Ice Breaking trial in first-year sea ice with a thickness of one metre, a trial aimed at confirming the ship's capability and validating the design of the Class. This deployment saw a RCN ship sailing the furthest North in Canadian waters during winter months in more than fifty years.

- Throughout the fiscal year, technical and procedural preparations were also performed to ensure the readiness of HMCS *Harry DeWolf* to interact with CH-148 Cyclone helicopter expected to commence in spring 2021.
- The RCN also continued its preparation to accept the second ship of the Class, the future HMCS *Margaret Brooke*. These preparations included the assignment and training of personnel to crew the ship as well as enabling knowledge transfer to shore maintenance personnel so as to continue developing a cadre of technical experts to maintain the ships of the Class at peak performance for future years.

The Operational Training Unit (418 Squadron), within the Search and Rescue Training Centre, commenced operations, conducting the various stages of Initial training for both Aircrew and Maintenance personnel. Associated simulation and training devices such as full flight simulator, mission simulator and maintenance trainer have been accepted and put into service. Additionally, five CC-295 fixed wing search and rescue aircraft have been accepted, one has been delivered and used in Qualification activities.

The COVID-19 pandemic has significantly changed the Royal Canadian Air Force (RCAF) work environment and has affected the way many people interact and work together. As the RCAF adjusted and readjusted – ensuring that defence commitments continued to be met safely – the RCAF continued to pursue innovation initiatives while remaining focused on the overall well-being of all aviators. Operation TALENT, which aims to implement a comprehensive set of actions to address intake, training, absorption, and employment – including quality of life and quality of service – of RCAF personnel, remained a top priority in FY 2020-21 and success has been steady. Most notably, the RCAF has two new occupations: the Air Operations Officer and the RCAF Reserve Air Operations Support Technician, whose numbers continued to grow across Canada.

The Commander of the RCAF formally established the Directorate of Environment and Operational Sustainability in FY 2020-21 to develop its historically successful environmental programming to include a broader policy perspective, addressing sustainability and climate change issues associated with RCAF operational activities and wider government interests.

- The RCAF also assembled an Aviation Fuels Working Group in 2020 to shape the Aviation Fuels strategy and oversee its execution in future years.
- With respect to climate change adaptation, the RCAF commenced work on a phased review of climate change operational impacts.

The Canadian Special Operations Forces Command remained postured at a very high readiness level to disrupt or respond to emerging crisis situations or threats to Canadians and Canadian interests.

Furthermore, the Canadian Special Operations Forces Command contributed to the CAF's ability to anticipate threats through the generation of forces designed to conduct low-profile intelligence collection, surveillance and reconnaissance activities.

For more information, refer to the following websites:

- Learn about various [military exercises](#)^{lxxxix} that train and prepare the CAF for future operations at home and abroad.
- [Royal Canadian Navy](#)^{xc}
- [Canadian Army](#)^{xc}
- [Royal Canadian Air Force](#)^{xcii}
- [Canadian Special Operations Forces Command](#)^{xciii}
- [Canadian Joint Operations Command](#)^{xciv}
- [Canadian Forces Intelligence Command](#)^{xcv}
- [NORAD](#)^{xcvi}

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
2.1 Canadian Armed Forces are ready to conduct concurrent operations	% of operations that are capable of being conducted concurrently	100%	31 March 2025	100%	100%	100%
	% of force elements that are ready for operations in accordance with established targets	100%	31 March 2025	79%	80.34%	71.7%*

Notes:

* There is a perceived decline of readiness compared to last fiscal year caused by COVID-19. This is due to expiring competencies arising from school closures and cancelled training due to COVID-19 health measures. The target of 100%, which should be reached by 2025, represents the full implementation of SSE initiatives that support the readiness of force elements.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{xvii}.

Departmental Result 2.2 – Military equipment is ready for training and operations

Although equipment is made available to support CAF training and operational requirements through the National Procurement Program, serviceability of equipment is ensured by the CAF undertaking minor repair activities within their formations as they use the equipment available to deliver Ready Forces. More information on the National Procurement Program is located in this report under [Core Responsibility 5 – Procurement of Capabilities](#).

Due to persistent COVID-19 impacts, which forced the deliberate prioritization of maintenance resources through FY 2020-21, limited progress could be made towards the CA's goal of an 80 percent serviceability rate by 2023. This goal continues to be evaluated in respect to operational requirements by the adoption of general and pandemic-specific lessons learned.

FY 2020-21 saw an overall drop in serviceability of aerospace fleets driven mainly by the lower serviceability of the Tutor and Hornet fleets. The Tutor fleet experienced a 3-month operational pause following a crash in Kamloops, British Columbia in July 2020. During that pause, the majority of the Tutor fleet was required to remain located in Kamloops, physically distant from their Main Operating Base (MOB). The few travelling maintenance personnel who accompany the Snowbirds do not provide the deep maintenance capability found at a MOB, especially for in-depth calendar-based cyclical inspections; the Tutor aircraft were not permitted to return to their MOB until each aircraft passed mandated inspections and was declared fit to fly. As a result, Tutor serviceability was very low between 10 July and 25 September 2020. By contrast, the Hornet fleet's decline in serviceability was largely due to the impact of the COVID-19 workplace restrictions on maintenance crews. This was particularly an issue at 3 Wing Bagotville where the provincial health regulations significantly limited the numbers of technicians simultaneously permitted in the work place.

429 Transport Squadron forges a new path with mixed reality aircraft maintenance

Corporal Mikkie Goswell-Payne, 429 Transport Squadron technician based at 8 Wing Trenton, conducts repairs on a CC-177 Globemaster while using Microsoft's HoloLens mixed reality system in February 2021.



(Photo credit: Corporal Zebulon Salmaniw)

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
2.2 Military equipment is ready for training and operations	% of maritime key fleets that are serviceable to meet training and readiness requirements	At least 90%*	31 March 2021	91.4%	98.2%	94.1%
	% of land fleets that are serviceable to meet training and readiness requirements	At least 70%*	31 March 2021	72%	65.4%	62.7%**
	% of aerospace fleets that are serviceable to meet training and readiness requirements	At least 85%*	31 March 2021	79.1%	60.8%	55%***

Notes:

* A portion of the fleet will normally be subject to repairs due to the use of fleets and thus not be serviceable. As such, a target of 100% would not reflect a realistic goal. A healthy fleet should, however, reflect a low proportion of the fleet that is unserviceable in order to ensure that the appropriate level of training and readiness can be provided. Note that the concept of "serviceable" differs significantly between military environments due to the inherent differences across types of equipment.

The RCN does not include vessels that are unavailable due to a scheduled maintenance period (such as Short Work Periods and Docking Work Periods) when calculating the percentage of vessels that are ready for training and operations. The indicator is calculated with the following formula: Total number of vessels in a key fleet x 365 days (minus all days spent in a scheduled maintenance period) divided by the actual number of days that those vessels were serviceable.

In the Maritime context, the indicator refers to the aggregate number of serviceable vessels that comprise the key fleets. These fleets are the Halifax, Victoria, Kingston and Harry DeWolf classes.

In the army context, the indicator refers to the aggregate number of equipment that comprise the land fleets.

In the air force context, the indicator refers to the aggregate number of equipment that comprise the aerospace fleets.

** During FY 2020-21 the serviceability level of land operational equipment met the current CA operational remits and force generation activity requirements. The CA Equipment Readiness Plan serviceability rate of the fleet for the FY was 62.7%. The target was not achieved due to persistent COVID-19 impacts on limited maintenance resources, increased maintenance requirements caused by advancing fleet age and fleet specific issues,

which all contributed to lower serviceability levels. ^{xvii}**Note** - The LAV III and MLVW fleets underwent divestment activities in FY 2020-21, and were excluded from this figure.

*** FY 2020-21 saw an overall drop in serviceability of 5.8%, driven mainly by the lower serviceability of the CT-144 Tutor and CF-18 Hornet fleets. The CT-144 went through an Operational Pause following the crash in May 2020, during which time the serviceability was reported as zero. This resulted in an annual serviceability drop of 17.6% for the CT-144. Additionally, the CF-18 serviceability dropped by 11.8% from the previous year. This can mainly be attributed to the impact of COVID-19 work restrictions, which particularly affected 3 Wing Bagotville.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{xviii}.

Budgetary financial resources (dollars)

2020-21 Main Estimates	2020-21 Planned spending	2020-21 Total authorities available for use	2020-21 Actual spending (authorities used)	2020-21 Difference (Actual spending minus Planned spending)
9,716,036,927	9,760,714,328	11,722,566,619	11,719,160,120	1,958,445,792

Human resources (full-time equivalents)

2020-21 Planned full-time equivalents	2020-21 Actual full-time equivalents	2020-21 Difference (Actual full-time equivalents minus Planned full-time equivalents)
46,489	45,431	(1,058)

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{xix}.

Defence Team

Description

Recruit, develop and support an agile and diverse Defence team, within a healthy workplace free from harmful behaviour; support military families; and meet the needs of all retiring military personnel, including the ill and injured. Strengthen Canadian communities by investing in youth.

Results

People continued to be at the core of everything the department does to ensure Canada remains strong, secure and engaged in the world. Our mission's success depends on having healthy, resilient, well trained and motivated Canadian Armed Forces (CAF) personnel supported by talented and dedicated defence civilians working within the Department of National Defence (DND). This integrated civilian military Defence Team is the heart of our institution.

We have made significant strides in ensuring that the entire Defence Team has the care, services and support it requires, and have continued to work towards eliminating harassment and discrimination in the workplace. We have improved attraction efforts in order to recruit talented, motivated Canadians who reflect the broad range of cultural, linguistic, gender, age and other unique attributes that will contribute directly to our efforts to develop a deeper understanding of our increasingly complex world. We have continued to improve and focus on our most important commitment: investing in our people.

The CAF continued to be committed not only to its members but also to their families. As our people continue to serve in complex and challenging environments, with varying threat levels, both at home and abroad, we have consistently delivered essential programs and services to give our members comfort, knowing that their families are being looked after.

National Defence has a long and proud history of supporting youth through the Cadet and Junior Canadian Rangers programs, and remained committed to strengthening support and expanding the reach of these important programs. In October 2020, the Defence Team published its evaluation of the Cadets and Junior Canadian Rangers youth programs. The report proposed multiple action items to expand institutional support and enhance youth programs' effectiveness and efficiency. As a result, Defence began work to enhance the delivery of the Cadets and Junior Canadian Rangers programs and focus on expanding the programs' reach to areas with the highest impact on Canadian communities and youth, as outlined in Canada's Defence Policy.

Military Family Services facilitates a Facebook group called [#MyVoice](#)^c. With over 2 900 Canadian military family members, #MyVoice is an open forum that allows members to share the military family experience, which has resulted in changes to programs and services. Throughout FY 2020-21, Military Family Services developed guidance and protocols to enable all Military Family Resource Centres to adapt service delivery models quickly in order to respond to COVID-19. This included a quick transition from in person service delivery to virtual service delivery. These new programs reflect the evolving needs and concerns of our members and their families.

Because the pandemic and departmental business continuity plans, the Canadian Defence Academy's three military colleges and the Osside Institute provided education and training remotely. The instructors adjusted the curriculum while shifting to remote learning methods. Educational objectives were met, and in some instances exceeded, despite a decrease in face-to-face interaction and the loss of the in-person classroom learning environment. The lessons learned and technologies used will benefit our institutions beyond the pandemic. Virtual learning will be used well into the future to expand access to education.

In FY 2020 21, the CAF continued to leverage the Innovation for Defence Excellence and Security (IDEaS) Program to advance solutions for challenges such as understanding and addressing Post Traumatic Stress Disorder (PTSD); recruiting and retaining women in the CAF; managing integrated human resources data; finding innovative methods for language learning and retention; and improving CAF members' transition to civilian life.

Gender-based analysis plus (GBA Plus)

The Directorate for Gender Equality and Intersectional Analysis (DGEIA) was officially formed in July 2020 by merging the Directorate for Gender Diversity and Inclusion and the Directorate for Integration Gender Perspective. This merger has resulted in more coordinated and focused efforts and consistent advice to incorporate GBA Plus early when developing policies, directives and programs, and when planning and carrying out operations in order to advance gender equality and the Women, Peace and Security (WPS) agenda across the Defence Team. DND and the CAF continued their systems-wide institutional approach to integrating GBA Plus requirements and accountabilities into processes and systems, and providing expert technical support for conducting intersectional gender-based analyses. Equitable business resumption plans—focusing on how working from home is a different experience for every DND employee and CAF member—used GBA Plus to identify the intentional and unintentional impacts of DND and the CAF’s work-from-home model.

GBA Plus was also used to plan and carry out Operation LASER and Operation VECTOR, Canada’s military operations in response to COVID-19, to ensure that all of our responses to requests for assistance took into consideration the population’s intersectional needs and the suitability of the CAF members selected for the mission.

More information on GBA Plus governance structures, human resources and planned initiatives can be seen in the “GBA Plus Supplementary Information Table” in the [Supplementary information tables](#) section of this report.

Experimentation

Defence-related experimentation activities are outlined in this report under [Core Responsibility 4 – Future Force Design](#).

Key Corporate Risk(s)

Defence acknowledges that misconduct is a critical concern and the resulting risk is currently being defined as Defence better frames the breadth of the issue.

Departmental Result 3.1 – Canadian Armed Forces is growing towards its end state of 101,500 personnel

Although face-to-face initiatives were not possible throughout FY 2020-21 because of the pandemic, the Recruiting Group:

- Advanced multiple customer service initiatives by establishing a scheduling function on the [CAF’s website^{ci}](#) to enable potential recruits to book time with recruiters online to facilitate conversations;
- Refined the understanding of key responsibilities, and ensured strategic and operational collaboration and consistent messaging;
- Improved social media collaboration to ensure that recruitment messaging is consistent and efforts are aligned with the many different organizations within the department;
- Enhanced the use of marketing on social media platforms, echoing all strategic-level campaigns and dates of opportunity such as International Women’s Day; a social media concept of operations and an attractions plan were developed;
- Increased the use of Google Analytics to understand regional trends in user traffic to the [CAF’s website^{cii}](#) and worked to adjust content and processes to maximize the interactivity of users;
- Researched third-party analytics capabilities to recognize, analyse and respond to trends in user traffic to the [CAF’s website^{ciii}](#);
- Worked with the Marketing and Advertising Directorate and focus groups throughout the year to better understand this domain; increased the representation of visible minorities in marketing and advertising programs, and leveraged a strategic advertising Indigenous campaign to achieve diversity targets;

- Synchronized efforts focused on Employment Equity goals for women by designing advertising campaigns appealing to women, improving the [CAF's webpage](#)^{civ} "Women in the CAF", and holding virtual recruitment info sessions for women;
- Supported the development of a program to provide near real-time tracking of military occupations by gender and by diversity targets; and
- Modernized many recruiting processes, moving into the virtual domain; while face-to-face events such as the Royal Canadian Navy (RCN)'s recruiting Operation KAIROS PASSANT were not possible, the Canadian Forces Recruiting Group held virtual job fairs and hosted information sessions on social media platforms.

CA recruiting and individual training was hampered in FY 2020-21 by pandemic-imposed restrictions. However, these restrictions have accelerated the transition of CA attraction activities to virtual platforms, for example information sharing over social media, virtual open houses, radio, newspapers, webinars and online application process on [the CAF's website](#)^{civ}.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
3.1 Canadian Armed Forces is growing towards its end state of 101,500 personnel*	% of Regular force positions that are filled	95 – 100%	31 March 2026	99.23%	96.5%	93%
	% of Reserve force positions that are filled**	95 – 100%	31 March 2026	77.09%	81.47%	79.78%
	% of occupations with critical shortfalls	Less than 5%	31 March 2021	16.5%	17.9%	50.5%***

Notes:

* The Departmental Result of 101 500 personnel represents the Canadian Armed Forces (CAF) Regular Force and the Reserve Force. The Reserve Force represents Primary Reserves.

** The Reserve Force structure is currently being updated to meet *Strong, Secure, Engaged*: Canada's Defence Policy intent; therefore, the target will be updated once the new structure is approved.

*** As a result of the impact the COVID-19 pandemic had on the CAF's ability to attract, recruit and train personnel, CAF intake was less than attrition in 2020-21. This resulted in the inability to sustain and grow the health of many occupations. The impact of COVID-19 has also made it difficult to project out two years to determine the status of occupations as per the normal methodology, and thus this is a snapshot as of 31 March 2021.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{civ}.

Departmental Result 3.2 – The health and well-being of the Defence team is well supported

- Canadian Forces Health Services continued to enhance its capabilities to support concurrent CAF operations. In the midst of a global pandemic, COVID-19 testing capabilities on deployed operations and personal protective equipment procurement were critical to ensuring that Canadian Forces Health Services personnel were ready to assist Canada's most vulnerable populations during [Operation LASER^{cvii}](#), and ensuring that deployed operations were able to operate safely and effectively in a pandemic environment. Canadian Forces Health Services carried out the CAF COVID-19 vaccine campaign in Canada and for deployed CAF members and eligible civilians, and provided support for vaccine delivery and administration in multiple vulnerable communities as part of [Operation VECTOR^{cviii}](#). Furthermore, Canadian Forces Health Services Critical Care Aeromedical Evacuation teams, in collaboration with the Royal Canadian Air Force, conducted a critical medical evacuation of a CAF member and their family from abroad, using the newly acquired aeromedical bio-containment evacuation system.
- As the principal domestic health care provider for eligible CAF members, Canadian Forces Health Services had to pivot to alternate ways of delivering primary health care using virtual means. The lessons learned will be incorporated in planning as a way to reach out to remote and rural locations where CAF members live.
- Canadian Forces Health Services continued to define and shape the organizational structure required to improve the efficiency and effectiveness of CAF operations both domestically and abroad. The Canadian Forces Health Services Headquarters made improvements in key areas such as health services quality, evaluation, policy formulation and coordination. The COVID-19 pandemic highlighted problem areas in health services that will be improved through modernization efforts.
- Because of COVID-19, training opportunities were limited; therefore, the development of the forward medical evacuation capability was sustained, but not advanced.
- The CAF Transition Group continued to develop policies and procedures to provide high-quality personalized support to all CAF personnel during transitional periods in their careers, including their release from the CAF and return to civilian life.
- In pursuing greater integration between stakeholders involved in supporting transitioning CAF members, the CAF Transition Group and its internal partners updated and streamlined accountability, and determined which responsibilities and authorities affect transition. Additionally, new staff positions at the CAF Transition Group Headquarters were dedicated to the strategic management of external partnerships, including governmental and non-governmental organizations.
- Despite the COVID-19 pandemic, the Sexual Misconduct Response Centre (SMRC) provided virtual trauma-informed care training to other parts of DND and the CAF, including parts of the Canadian Forces Health Services and the chaplains, to assist them when receiving disclosures of sexual misconduct.
- While the COVID-19 pandemic prevented in-class workshops from being given, the Respect in the CAF workshop was delivered, which allowed 1 224 Defence Team members, primarily CAF members, to receive the training.
- The SMRC 24/7 line received 509 calls from CAF members (compared to 497 in FY 2019-20) and 278 calls from non-CAF members (compared to 152 in FY 2019-20), which represent a slight increase in calls from CAF members over FY 2019-20, but nearly a 100 percent increase calls from non-CAF members.
- The number of clients using the Response and Support Coordination program increased from 47 in FY 2019-20 to 91 clients in FY 2020-21, and 29 cases were closed in FY 2020-21.

- The Military Liaison Team supported 260 callers in FY 2020-21 (compared to 144 in FY 2019-20). The Military Police Liaison Officer saw a slight decrease in calls over the same period, from 103 in FY 2019-20 to 86 in FY 2020-21.
- The Defence Team met the requirements outlined in [Bill C-65](#)^{cx} and implemented the Workplace Harassment and Violence Prevention Interim Policy. This policy aims to provide education and raise awareness in order to prevent incidents of harassment and violence from occurring; respond to incidents effectively by conducting an investigation; and support affected employees throughout the resolution process. New mandatory harassment and violence prevention training for both employees and managers was rolled out to help create a safe and respectful work environment. DND took the following actions to foster a culture of respect and fairness:
 - Promoted positive space training to foster a safe and inclusive workplace;
 - Identified respect and harassment prevention training as part of our corporate learning commitments to support a healthy workplace; and
 - Implemented the Workplace Harassment and Violence Prevention Interim Policy in response to Bill C-65.
- CAF initiated work on the CAF Code of Professional Conduct, which will address all conduct and behaviour, and is tied to the rewrite of Duty with Honour and the Defence Team Code of Values and Ethics. The CAF Code of Professional Conduct promotes compliance and is viewed as a mechanism for facilitating culture change.
- The new CAF policy to address hateful conduct was developed and published in 2020. A supporting CAF Hateful Conduct Incident Tracker was implemented and is used to monitor incidents that occur and incidents under investigation.
- The Administrative Response Centre stood up to full operational capability in FY 2020-21, which made it easier for CAF members and the chain of command to access information on all Military personnel topics. Through the Administrative Response Centre, the grievance portfolio was reduced by five percent at the end of the fiscal year, and the backlog was reduced by 20 percent.
- The Office of Disability Management was stood up and provided support to ill, injured and impaired employees and their managers. The Office of Disability Management expanded its to support the entire National Capital Region, and regional offices were opened in Comox, British Columbia; Edmonton, Alberta; and Winnipeg, Manitoba.
- DND and the CAF completed the Defence Team Total Health and Wellness Strategy and were authorized by the Treasury Board to spend nearly \$700M over the next 17 years on care for DND, the CAF, and military families.
- Research and development for a new chaplain hour series was completed. This series will support the Defence Team Total Health and Wellness Strategy and the envisioned CAF Culture Change.
- The CAF continued to take a broad approach to supporting members and family wellness. Through many interconnecting efforts across the CAF, including suicide prevention, as outlined in the [Suicide Prevention Action Plan](#)^{cx}, and programs that merged with the goals of the Defence Team Total Health and Wellness Strategy. Engagement of subject matter experts, including a suicide prevention specialist, augmented the CAF's range of mental health care and support services that allow for tailor support to the mental health needs of all CAF members.
- To address suicide prevention in the CAF, chaplain-led SENTINEL training was updated and 3 000 new SENTINELs were trained in FY 2020–21. SENTINEL is a peer support program comprising of military members who are given training and then supervised to detect signs of distress in their colleagues and offer them support.
- Virtual religious and outreach services were implemented in order to support the spiritual and emotional health of members and their families, and advise leadership on the Force's moral in

accordance with “Called to Serve (2020–2030), The Royal Canadian Chaplain Service Spiritual Resilience and Well-Being Strategy”.

- An evaluation of the Employee Assistance Program was conducted by an external party to determine whether DND’s Employee Assistance Program model continues to meet the needs of DND employees and their families. The evaluation results will be assessed and incorporated into the program improvement strategy to determine future service offerings. The Employee Assistance Program was also adapted during the COVID-19 pandemic response to ensure that the unique needs of employees were met.
- DND provided mental health materials, tools, resources and support via [DND’s COVID-19 Mental Health and Wellness page](#)^{cxix}, the [HR GO RH mobile app](#)^{cxii}, social media and other DND publications. To support employee health and well-being and enhance employee resilience during the COVID-19 pandemic, the department completed the following initiatives:
 - Prepared evidence-based articles on coping strategies, back-to-school considerations and parenting strategies to support the Defence Team;
 - Developed a new course on resilience for the Defence Team;
 - Developed a Mental Health and Wellness Conversations Manager’s Guide; and
 - Held virtual mental health events and webinars to support employees.
- COVID-19 dramatically transformed the work environment, and the Defence Team is now working with a [varied, remote and on-site workforce](#)^{cxiii}. To support this transition, the department implemented the following initiatives:
 - Introduced a directive on managing a flexible and varied civilian workforce;
 - Launched a [Civilian Flexible Work Program \(FWP\)](#)^{cxiv} for the department to provide direction, guidance and resources on remote work to employees and managers;
 - Developed virtual onboarding and off-boarding resources and tools; and
 - Developed and implemented virtual training to support mandatory and continuous learning and development in a pandemic environment.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
3.2 The health and well-being of the Defence team is well supported	% of military personnel who are medically fit for their occupation	90%*	31 March 2021	90.51%	89.84%	87%**
	% of military personnel who feel that the Canadian Armed Forces provides a reasonable quality of life for themselves and their families	85%*	31 March 2021	53.2%	56.7%	54.4%***
	% of Canadian Armed Forces members who report a high level of workplace well-being	69%*	31 March 2021	64.3%	71.5%	67.4%****
	% of civilian employees who describe the workplace as psychologically healthy	To be determined by 31 March 2021*****	To be determined by 31 March 2021	59%	79%	66%

Notes:

* Targets are revisited yearly, as further data becomes available, to better understand the realities and drivers of these indicators.

** The discrepancy between the target and the actual result can be partly attributed to the system not being fully up to date because COVID-19 prolonged the process of medical releases and the assignment of Permanent Medical Categories (both of which impact the result).

*** The 85% target was intentionally set as "aspirational"; it has historically been around 54% (2015–2020 average).

**** Although the FY 2020–21 result (67.4%) is lower than the FY 2019–20 result (71.5%), the decrease (due to the natural variability inherent in surveys) has been assessed as not significant from a statistical analysis perspective though the results remain relevant in informing continued efforts.

***** This indicator is taken from the Public Service Employee Survey (PSES). The target and the date to achieve for departments have not yet been established. We will consider establishing one for the 2022–23 Departmental Plan.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{cxv}.

Departmental Result 3.3 – The Defence team reflects the values and diversity of Canadian society

- The Defence Team published *The Path to Dignity and Respect: The CAF Sexual Misconduct Response Strategy*^{cxvi} (referred to as *The Path*) in October 2020. *The Path* is a comprehensive culture change strategy informed by research and evidence, reviewed both internally and externally, that uses best-practice culture change models adapted for the CAF. The Path includes a renewed focus on improving reporting processes, incident response and investigation. A formal review was initiated to seek feedback from stakeholders and subject matter experts. In November 2020, *Defence Administrative Orders and Directive (DAOD) 9005-1 Sexual Misconduct*^{cxvii} was published, establishing a unified policy on sexual misconduct within the CAF.
- Integrated conflict and complaint management services continue to be offered to CAF members, providing a one-stop shop for timely access to information, support and guidance in navigating the sometimes complex conflict and complaint mechanisms. This ensures that workplace issues are properly unpacked so that appropriate solutions can be identified quickly and effectively. Through the use of an integrated database, this service provides trend analysis and strategic visibility on conflicts and complaints within the CAF, information that directly supports the modernization and advancement of policies and processes. Furthermore, the CAF continues to review and assess the

harassment complaint procedures to ensure not only that they serve CAF members appropriately but also that they remain appropriately aligned with the requirements of Bill C-65.

- DND and the CAF contributed to consultations with a class action representative, external subject matter experts and CAF stakeholders for both Heyder Beattie and LGBT Purge Class Action Litigation Final Settlement Agreements. Consultations have resulted in findings and recommendations aimed at improving support for applicable communities and supporting a more inclusive culture in the CAF.
- In FY 2020–21, the department published the CAF Employment Equity Report for FY 2019–20 and the DND Multiculturalism Report for FY 2019–20.
- More than 90 percent of the CAF Employment Equity Plan (2015–2020) action items were implemented by FY 2020–21.
- The Defence Team Pride Network was formally recognized and the first Defence Team Champion for the LGBTQ2 Plus communities was appointed.
- A strengthened CAF Employment Equity Plan (2021–2026) was being developed, building on the successes of the previous plan, and scheduled for publication in 2021. The updated plan is an extensive multi-year commitment aiming to increase representation of the CAF's long-term goals and set conditions to support a safe, inclusive and equitable work environment for designated group members and the lesbian gay bisexual transgender queer and two-spirited communities.
- CAF initiated a CAF Human Resources Strategy to guide the transformation of the Military Personnel Management System. The Strategy is based on an analysis of the future operating environment, the emerging personnel environment (i.e. evolving Canadian society and business trends) and an internal scan (i.e. existing strengths and weaknesses of the CAF Military Personnel Management System).
- The department carried out the following actions, via our human resources management practices, to advance diversity and inclusion:
 - Implemented the Diversity and Inclusion Action Plan and the initiatives to support the Directive to Increase Diversity and Inclusion in the Civilian Workforce;
 - Addressed diversity and inclusion consistently at various events, such as executive town halls and executive orientation; and
 - Established an Anti-Racism Task Force to identify barriers and systemic discrimination, review existing and new human resource (HR) policies and programs, develop resources and tools for employees and managers, and promote opportunities to learn about cultural awareness, racism, discrimination and harassment.
- The Diversity and Inclusion Strategy for the Executive Community has made progress in addressing employment equity and diversity gaps at the most senior levels of the department, particularly via recruitment and talent management initiatives. In FY 2020–21 the department:
 - Incorporated employment equity and GBA Plus into all aspects of executive recruitment and staffing to minimize biases and promote inclusion;
 - Ensured that employment equity considerations remained the top priority when recruiting and selecting executives; this included actively advertising and promoting job opportunities through various social media forums to reach diverse talent; and
 - Launched an Executive Visible Minority Development Program and [Recruitment Campaign](#)^{cxviii} by conducting a targeted EX-01 process for visible minorities and Black people, that used innovative artificial intelligence technology to reduce biases while providing opportunities to increase the representation of minority groups in the EX classification.
- Opportunities to support diversity and inclusion throughout the recruitment process were identified, including:

- Identifying actions to remove systemic barriers and create opportunities to recruit more diverse individuals who represent equity-seeking groups;
 - Establishing a framework to launch an inventory of diverse participants for assessment boards;
 - Promoting and expanding the use of combined experience and training, in addition to formal education, to reduce education barriers;
 - Launching mandatory training on anti-racism and unconscious bias in the HR community and for hiring managers; and
 - Promoting the pre-qualified pools of the Public Service Commission's Indigenous Student Employment Opportunity program and the Employment Opportunity for Students with Disabilities program.
- Indigenous summer programs that partner with Indigenous leaders to provide a blend of military training and Indigenous culture to hundreds of First Nations, Inuit and Métis participants through programs across Canada (namely [Bold Eagle^{cxix}](#), [Black Bear^{cxx}](#), [Carcajou^{cxxi}](#), and [Grey Wolf^{cxxii}](#)) were significantly impacted by public health measures as was the support to Junior Canadian Rangers. In order to ensure that activities can ramp back up when conditions permit, the Defence Team continued to leverage the cultural understanding, perspectives and experiences of our Defence Aboriginal Advisory Group members, drawing on their relationships and connections with local communities across the country. This advisory group also supported the Commander of the CA, as the Defence Team Champion for Indigenous Peoples.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
3.3 The Defence team reflects the values and diversity of Canadian society	% of the Canadian Armed Forces (CAF) who self-identify as a woman	25.1%	31 March 2026	15.7%	16%	16.3%*
	% of civilians in the Defence team who self-identify as a woman	39.1%	31 March 2026	40.4%	40.8%	Results not available**
	% of the Canadian Armed Forces (CAF) who self-identify as a visible minority	11.8%	31 March 2026	8.7%	9.4%	9.5%*
	% of civilians in the Defence team who self-identify as a visible minority	8.4%	31 March 2026	8.9%	9.6%	Results not available**
	% of the Canadian Armed Forces (CAF) who self-identify as an indigenous person	3.5%	31 March 2026	2.8%	2.8%	2.8%*
	% of civilians who self-identify as an indigenous person	2.7%	31 March 2026	3.4%	3.4%	Results not available**

% of the Canadian Armed Forces (CAF) who self-identify as victims of harassment	Less than 11.9%	31 March 2021	17.7%	16.7%	15.5%***
% of civilians who self-identify as victims of harassment	To be determined by 31 March 2021****	To be determined by 31 March 2021	16%	14%	12%
% of the Canadian Armed Forces (CAF) who self-identify as victims of discrimination	Less than 9.2%	31 March 2021	14.9%	11.8%	14.5%*****
% of civilians who self-identify as victims of discrimination	To be determined by 31 March 2021****	To be determined by 31 March 2021	7%	7%	7%
Annual number of reported incidents of sexual misconduct in the Defence team	To be determined by 31 March 2021*****	To be determined by 31 March 2021	256	356	431
Number and type of actions taken in response to reported sexual misconduct incidents by the Defence Team	To be determined by 31 March 2021*****	To be determined by 31 March 2021	256	356	431*****
Number of Defence team members who have attended a training session related to sexual misconduct (Operation HONOUR)	To be determined by 31 March 2021	To be determined by 31 March 2021	Results not available New indicator as of 2020–21	Results not available New indicator as of 2020–21	1 224*****
% of civilians in the Defence team who have completed mandatory harassment training	To be determined by 31 March 2021*****	To be determined by 31 March 2021	Results not available New indicator as of 2020–21	Results Not available New indicator as of 2020–21	31%

Notes:

* Meeting the target has been an ongoing challenge especially in the COVID-19 environment. DND/CAF are currently reviewing conduct, diversity and inclusion as a whole in an effort to improve the culture of the Defence Team and to reflect the values and diversity of Canadian society. Ongoing efforts include, but are not limited to, the Canadian Forces Employment Equity Plan 2021–26.

** The data for this indicator, provided by an organization external to National Defence, was not available at the time of the production of this report.

*** Reducing and eliminating harassment within the CAF is a continued effort. The CAF continues to analyze this complex issue and has launched a working group in March 2021 to analyze the current CAF harassment framework and to modernize and align with other related policies, where possible. The results of this work and analysis will ensure that the CAF is able to improve existing harassment policies, complaint processes, and prevention efforts. This year's results are similar to last year, with a slight decline. We expect our continued efforts in this area to yield positive results but also recognize the complexity of this matter.

**** Setting targets for these indicators has been delayed because of ongoing legal activity that will directly affect the target. Data has been collected on this indicator for the previous FY, and once the legal activity has concluded, a realistic target using the previous year's data as a baseline will be put in place.

***** This year, the CAF continued to increase the number of mediations to resolve human rights complaints. These successful mediations represent positive complaint outcomes via timely resolutions that are agreeable to all parties involved. This can be attributed to the positive relationship the CAF has with the Canadian Human Rights Commission (CHRC) and their confidence in the CAF team to adopt a mediated approach to complaint resolution. This year, there was an increase in the percentage of CAF members who have self-identified as a victim of discrimination. This may be indicative of greater willingness to come forward to resolve issues and seek a resolution. Sustained efforts in this area are expected to yield positive results for this indicator over time.

***** DND is still establishing how to approach the process around Operation HONOUR, which has culminated, as efforts are under way to assess lessons learned and move to an improved approach. Targets will be established as the indicator matures.

***** The data provided is for the incidents reported and recorded within OPHTAS between 1 April 2020 and 31 March 2021. OPHTAS only records incidents reported by or to the chain of command. Incidents may not be reported to the chain of command for a variety of reasons, such as when an affected person discloses an incident to the Sexual Misconduct Response Centre (SMRC) and requests that no formal report or investigation be initiated. Each recorded incident in OPHTAS is investigated, leading to an outcome.

***** Training on sexual misconduct has been incorporated into all facets of CAF training, including at recruit school and in leadership training at all levels. In addition, a formal course called "Respect in the CAF" has been developed, with over 13 000 Defence Team members attending between 1 April 2017 and 31 March 2021. The data presented here represents those who have taken this course during the fiscal year. As this course is provided in a classroom setting, because of COVID-19 workplace management measures, no sessions were given between April and August 2020. Training resumed in September 2020 with public health measures in place.

***** A target of 85% was set for the Departmental Plan of FY 2021-22. Since then, the new mandatory Harassment and Violence Prevention training came into effect on 1 January 2021 and therefore, the results reflect completion rates for the last quarter of the fiscal year. Employees are only required to complete the new training by 31 December 2021. Results for FY 2020-21 were also affected by COVID-19 and its impact on training activities across DND.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase^{cxiii}](#).

Departmental Result 3.4 – Military families are supported and resilient

- Throughout FY 2020–21, Military Family Services applied the evidence-based research conducted through the Comprehensive Military Family Plan in order to modernize and better align services and resources with the needs of families. The service delivery model has been changed to better align the goal of ensuring families are aware of and able to access available services.
- Strongest Families, an online coaching service for parents with children and youth who have shown initial signs of anxiety and/or depression, supported 91 families.
- Since September 2020, Military Family Services have adapted their services to be delivered on a virtual platform, expanding emergency family care support, mental health counselling, family and intimate partner violence support, virtual health care, mental health counselling for children and youth, spousal employment, and non-clinical social support. The Family Information Line provided 346 virtual counselling sessions and supported 110 family members experiencing family violence (compared to 20 in the same period in 2019). The delivery of approximately \$360 000 to support virtual and in-person gender-based violence awareness training was also facilitated.
- Military Family Services applied the results of the research on families' relocation experiences to the new service delivery model as part of the Modernization of the Military Family Services Program Strategic Framework.
- During the summer of 2020, the COVID-19 pandemic had impacts on the planned postings and relocation of CAF personnel. For example, roughly 21 percent of personnel transfers were cancelled and, in some cases, individuals were kept in their positions a year longer than planned. For those postings that did happen, significant effort was undertaken to adapt policies to the situation, such as ensuring that travel respected the public health measures at the member's origin and destination. The deadlines to complete a move to a new location were also extended so that members and their families had more of a say in their situation. As a result, moves, which are normally completed by the end of the summer, continued until December 2020.
- As a result of COVID-19, the fourth Seamless Canada meeting took place virtually in December 2020 and was supported by the Canadian Intergovernmental Conference Secretariat. Outcomes included the provinces' and territories' willingness to solidify the structure of future Seamless Canada meetings. Additionally, the provinces and territories discussed their support for enhanced family supports related to health care, spousal employment, and education mobility for secondary students.
- The employment inventory of the Military Spouse Employment Initiative was expanded to all federal government departments and added to [DND's Careers^{cxxiv}](#) job matching portal, providing military spouses with a wider range of opportunities from across the federal public service. The initiative aims to provide military spouses and common-law partners with opportunities to develop their skills and pursue their careers. In FY 2020–21, DND established an organizational need on all public job postings for spouses or common-law partners of CAF members to be considered before all other candidates, except people with priority entitlements (e.g. medically released veterans or preference veterans), thus giving the Defence Team hiring managers the option to consider military spouses

and common-law partners first in an effort to support military families. In FY 2020–21, 51 military spouse hires were made, within and outside the department.

- Now that the 2020+ Strategic Framework for the Delivery of Services to Military and Veteran Families is complete, Military Family Services has begun to develop the practical application for service delivery within this new model. The new model involves developing formal guidance for the board of directors of the Military Family Resource Centres, thus making the Military Family Services Program's more accountable to federal authorities, including DND, the CAF and Veterans Affairs Canada.
- Military Family Services used research on families' experiences with medical release transitions to refine the new service delivery model as part of the Modernization of the Military Family Services Program Strategic Framework.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
3.4 Military families are supported and resilient	% of Canadian Armed Forces families who feel they meet the challenges of military life	85%	31 March 2021	87.6%	87.6%	87.6%*
	% of Canadian Armed Forces members who are satisfied with the overall support their family receives from the Canadian Armed Forces	85%	31 March 2021	71%	67.4%	67.4%**

Notes:

* As the Quality of Life Survey for Canadian Armed Forces families is only conducted every three years, this is the result from the 2018 survey. The next survey is planned for 2021, with results available in 2022.

** Given the Retention Survey periods, this is the result from 2019. The next Regular Force Retention Survey is planned for 2022, with results available in 2023, and the next Primary Reserve Force Retention Survey is planned for 2023, with results available in 2024.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{cxv}.

Departmental Result 3.5 – Youth in Canada are provided with experience and opportunities that enable a successful transition to adulthood

- In response to the evaluation of the Cadets and Junior Canadian Rangers programs, the Management Action Plan was initiated in FY 2020–21, as planned. As outlined in the plan, a new Memorandum of Understanding was signed with the three Cadet Leagues. A new consultative framework was developed and implemented. Many of the completed action items will serve as the corner-stones of initiatives such as the review of the cadet program's scope to optimize alignment between resources and expected outcomes. These action items and initiatives will lead to increased support for the department's youth programs and ultimately to enhanced experiences for young Canadians.
- The Cadets and Junior Canadian Rangers programs reviewed and refreshed their brand and leveraged internal and external communication tools, such as social media, to increase awareness of both programs within and outside DND and the CAF. Cadet Organizations Administration and Training Services members were highlighted throughout the year, including in the online video on the [Defence Team Network's 60 seconds with series](#)^{cxvii}. Additionally, a new communications strategy was prepared in FY 2020–21, which will advance the objective of the programs' identity project.

- The COVID-19 pandemic impacted the ability to deliver Cadets and Junior Canadian Rangers programming. In order to ensure optimal program delivery in these unprecedented times, the Cadets and Junior Canadian Rangers relied on their strategic national and international network to help deliver alternative programming. In addition to monitoring and sharing best practices with like-minded programs, the Cadets and Junior Canadian Rangers engaged with other cadet organizations to discuss virtual engagement and resumption of in-person activities. Some virtual international engagements between Canadian Cadets and Allied Country cadets were conducted to enhance the cadet experience. Finally, Cadets and Junior Canadian Rangers initiated work on a Global Engagement Strategy, which will guide international cadet engagement in the years to come.
- The department's National Student Hiring Program continued to leverage all available federal student hiring programs to employ students across the country in diverse fields. In FY 2020–21, the department hired 746 students. The department implemented several initiatives to employ students, including:
 - Leveraging digital recruitment through the [DND Careers mobile App](#)^{cxvii}, which has over 1 500 student profiles, to help support managers with workforce rejuvenation efforts;
 - Streamlining staffing procedures and developing virtual onboarding for the remote work environment;
 - Offering jobs on the spot;
 - Promoting targeted recruitment of Indigenous students and students with disabilities; and
 - Providing learning opportunities and resources to support students; 199 students were bridged into the public service following their employment.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
3.5 Youth in Canada are provided with experience and opportunities that enable a successful transition to adulthood	% of the target Canadian youth population that participates in Cadets and Junior Canadian Rangers	At least 2%	31 March 2021	2.05%	2.06%	2.02%

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{cxviii}.

Budgetary financial resources (dollars)

2020–21 Main Estimates	2020–21 Planned spending	2020–21 Total authorities available for use	2020–21 Actual spending (authorities used)	2020–21 Difference (Actual spending minus Planned spending)
3,416,850,794	3,444,253,339	4,102,372,061	4,057,640,230	613,386,891

Note:

The variance is due mainly to an increase in salary and benefits costs related to Canadian Forces pay increases and a Canadian Forces Superannuation Act (CFSA) actuarial adjustment.

Human resources (full-time equivalents)

2020–21 Planned full-time equivalents	2020–21 Actual full-time equivalents	2020–21 Difference (Actual full-time equivalents minus Planned full-time equivalents)
20,838	18,902	(1,936)*

Notes:

* The variances are due to regular military force and/or civilian in-year changes/updates resulting from a number of factors including adjustments in priorities, initiatives, projects, recruiting, salary and/or spending which ensure that the Defence program remains flexible and focused on key priorities as circumstances evolve.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{xxix}.

Future Force Design

Description

Develop and design the future force through a deep understanding of the future operating environment and security risks to Canada and Canadian interests. Enhance Defence's ability to identify, prevent, adapt and respond to a wide range of contingencies through collaborative innovation networks and advanced research.

Results

The future security environment presents a vast array of complex defence and security challenges that transcend national borders. In order to keep pace with our allies and potential adversaries, it is imperative that the Canadian Armed Forces (CAF) prioritizes efforts to design our future force. Future force planning is a long-term and ongoing activity that seeks to address future threats and defence and security challenges with effective solutions.

In FY 2020–21, the Department of National Defence (DND) and the CAF continued to support the ongoing implementation of Canada's defence policy, *Strong, Secure, Engaged: Canada's Defence Policy* (SSE) through effective innovation. Highlights from FY 2020–21 include:

- Defence Research and Development Canada (DRDC) remains engaged in experimentation, such as the Joint Arctic Experiment and JOINTEX. The All Domain Situational Awareness (ADSA) Science & Technology program has delivered a final report on air and maritime surveillance technologies. DRDC is formulating a broader scope for the Science and Technology program for pan-domain awareness;
- The IDEaS program launched a number of challenges, covering topics such as better energy generation in the north, reducing visual and infrared detection of our soldiers and vehicles, cyber protection of avionics networks and bus technologies, to name a few. IDEaS is a versatile program able to adapt to the rapid pace of change in today's fluid security environment. Canada's new approach to defence adopts new technologies and methods, and transforms the way people manage defence and security challenges. IDEaS launched 11 challenges in FY 2020–21, including seven through Call for Proposals 4, and four through a special COVID-19 focused Call for Proposals. In FY 2020–21, 97 projects were given initial funding to explore topics;
- IDEaS focused on the projects that aim to detect and track objects of interests. As a follow-on option to IDEaS, two Test Drive challenges have been identified: Ecopia (detection and classification of objects of interest) and Sapper Laps (cyber attribution);
- DND is conducting artificial intelligence (AI) research to automatically detect and identify objects by integrating images, videos, signals and other data for the purposes of monitoring the sea surface and land. Some of the results from this research are currently used in CAF operations. AI research is being performed to detect patterns of life and find anomalies in maritime traffic, and the results of this work is being considered for integration into operations. Since launching the program, IDEaS has initiated several challenges where innovators are using AI as part of their solution. Many of these projects are advancing through the various components of IDEaS, and some are progressing to the testing phase in order to be acquired and transferred to DND and the CAF for testing and evaluation; and
- The Defence Security, Science and Technology Program is developing and demonstrating the application of AI and Machine Learning to:
 - Monitor networks and systems for cyber-attacks;
 - Sentiment analysis of open source intelligence;
 - Recognize disinformation/misinformation; and
 - Detect, identify and track objects of interest using optical systems in army vehicles.

In its work to demonstrate AI-enabled solutions to detect, identify and track objects of interest in vehicle-borne tactical imaging systems, the Defence Security, Science and Technology Program has launched a number of IDEaS challenges including:

- Better than meets the eye: reliable object detection amongst the waves;
- Shields up! Defend and protect satellites from natural and artificial threats;
- Collision course: tracking and de-orbiting space debris;
- Persistent maritime surface sensor systems;
- Detection and classification of objects of interest;
- Persistent maritime surveillance; and
- “What is in this full motion video?”

DND provided funds for the Transport Canada Program [ARCTIC MIST^{xxxx}](#) which represents the next generation of sensor data fusion technology. Transport Canada’s [National Aerial Surveillance Program^{xxxxi}](#) conducts aerial surveillance operations using advanced sensor-equipped aircraft over all waters under Canadian jurisdiction, including the Arctic. Preventing pollution from ships by acting as a deterrent to potential polluters, monitoring ice conditions, conducting marine security patrols, aiding in search and rescue, and ensuring polluters are detected and prosecuted are among the program’s top priorities. Using an ensemble of neural networks and a novel data fusion system, ARCTIC MIST closes the gap between modern maritime surveillance requirements and operator capabilities, greatly enhancing operator situational awareness by analyzing data from multiple sensors in real-time and providing the operator with fused information.

DND provided funds for the Department of Fisheries and Oceans “Dark Vessel program”. Dark Vessel Detection makes use of fishing pattern detection algorithms to determine if a vessel is likely to be fishing. This is one small part of the project, and the machine learning (ML) code has already been developed by a non-government organization and is being incorporated into the larger work. International trials are currently under way with plans to implement the behavioural algorithm. The plan is to use satellites to detect and track so-called “dark vessels”—ships that have switched off their location transmitters to evade authorities. The desired outcome of the project is meant as a proof-of-concept—a scheme to work with developing nations and demonstrate how a combination of satellites can help focus the search for illegal fishers.

The Defence Security, Science and Technology Program continued low-level work on human-machine interaction aimed at improving the span of control for human operators by mitigating the cognitive workload.

DND and the CAF is a member of the Government of Canada Cyber Skills Developmental Working Group (chaired by Public Safety Canada), which is focused on human resources and training the Civilian Cyber Workforce. DND and the CAF awarded a contract to a civilian educational institution for the Developmental Period 1 Cyber Operator training. DND and the CAF recruiting centres are using the process of human resources training for the new training of unskilled candidates.

Experimentation

- Solutions provided by Industry to address innovation challenges continue to advance and are feeding into other [Innovation for Defence Excellence and Security^{xxxii}](#) (IDEaS) components. To advance DND and the CAF’s capabilities, two Competitive Projects (Component 1a: Up to \$200K for six months of development and Component 1b: up to \$1M for one year of development) and Demonstration tools (Sandbox) are proceeding. Sandboxes are an opportunity for innovators to test and demonstrate their solutions to published Defence challenges. The scenario and environment are provided by DND and the CAF, and participants will receive observational feedback from our experts and potential users.

In FY 2020–21, twelve contributions of up to \$1.5M each were awarded to Canadian university-led research micro-nets, which include industry and government sector partnerships. This funding supports

the development of revolutionary advances in materials science with a focus on emerging and advanced materials relevant to detection avoidance and physical protection against kinetic and non-kinetic threats. Research is also being done to promote revolutionary advances in our understanding of autonomous systems with a focus on trust and barriers to the adoption of such innovative and revolutionary technology. These micro-nets stimulate collaboration and the free flow of ideas critical to innovation in order to support the eventual development of real-world solutions for the CAF.

The IDEaS program launched 52 challenges aimed at various priority areas for DND and the CAF through its Competitive Projects elements. In FY 2020–21, through the Competitive Projects element, IDEaS was able to put over 210 contracts in place, representing more than \$32M in funding for individuals and organizations across Canada. Priority areas were as follows:

- Ensuring our Forces are protected when on active duty;
- Protecting Canada from cyber security threats;
- Accelerating next generation technologies;
- Greening defence operations, protecting our assets in space; and
- Finding new and improved ways to use platforms dedicated for Command, Control, Communications, Computers Intelligence, Surveillance and Reconnaissance (C4ISR).

A sandbox challenge was conducted at the Canadian Forces Base (CFB) in Suffield, Alberta. Selected innovators were invited to test and demonstrate technologies created to detect and defeat Unmanned Aerial Vehicles (UAV, commonly called “drones”).

A sandbox for examining solutions to the “Corrosion Detection In Ships” challenge was launched in April 2020, but because of COVID-19, it was postponed to April 2022. Although delayed, responses of interest from 25 companies were received.

As new challenges are identified, the IDEaS program will continue to explore other sandbox opportunities.

Key Corporate Risk(s)

There are no key corporate risks associated with the Future Force Design core responsibility at this time.

Departmental Result 4.1 – Defence capabilities are designed to meet future threats

In FY 2020–21, 48 contribution agreements valued at over \$8.6M were approved. The first results are to be expected within seven months. Challenge titles were as follows:

- Moral Trauma on the Frontline – See, Prevent and Treat;
- Rapid Response: Real-Time Insights for Pandemic Decision-Making;
- Scrubbing Your Scrubs: Finding Ways to Re-Use COVID-19 Protective Gear; and
- Super Sanitize: Cleaning Sensitive Equipment and Workspaces.

The launch of the Competitive Projects Call for Proposal #4 resulted in more than 50 (1a) contracts (\$200K/six months) awarded. Challenge titles are as follows:

- Essential Deliveries: Getting Vital Supplies to Troops Using Autonomous Vehicles;
- Armour Up! Modular Lightweight Armour for Land Vehicles;
- It’s Not Just Noise – Innovative Tools for Acoustic Sensor Operators;
- Better Than Meets the Eye: Reliable Object Detection Amongst the Waves;
- Making Data Make Sense: Real-Time Data Analysis for Rapid Decision-Making;
- Knot Vulnerable – Locking Down Cybersecurity on Naval Vessels; and
- Navigating Your Next Chapter – The Transition Back to Civilian.

Regarding test drive challenges, the first call for proposals was launched for Green Heat to retrofit older buildings using energy storage systems to reduce greenhouse gas emissions.

Two Competitive Projects investments (\$1.2M each) have moved on for testing/evaluation by stakeholders:

- A solution to the Cyber Attribution challenge valued \$7.5M from Sapper Labs to be tested by Canadian Special Operations Forces Command; and
- A solution to the Detection and Classification of Objects of Interest challenge from Ecopia is in development.

DND and the CAF continued the key tasks of the Force Mix Structure and Design (FMSSD) work to re-align the CAF's structure and ensure it can deliver the operational concurrency required by SSE. Specifically during FY 2020–21, FMSSD created detailed dashboards characterizing demand signals for each Force Element across multiple scenario sets, showing potential gaps, shortfalls or affluence. Public health measures challenged FMSSD's ability to meet with the various required stakeholders, but the FMSSD initiative was still able to provide robust datasets to support sophisticated resource discussions.

During FY 2020–21, DND and the CAF continued the capability based planning cycle, completing the analysis of force development scenarios and the capability based planning final report. The capability based planning cycle execution was delayed by approximately six months due to COVID-19 related restrictions.

Defence has a close partnership with the Canadian Centre for Cyber Security and Shared Services Canada to operate, monitor and protect DND and the CAF enterprise networks. Through DND and the CAF's Cyber Mission Assurance Program (CMAP), Defence engages other government departments and agencies to identify, evaluate, and investigate the defence of critical infrastructure that the Defence Team depend on to conduct operations in support of government objectives.

The Defence Team continued to advance CMAP to understand organizational risks and address these risks by enhancing cyber resiliency across the department. CMAP led efforts to develop a cyber threat intelligence capability in support of CMAP and cyber domain awareness materials to enhance the cyber resiliency of DND and the CAF. CMAP continues to work with federal government departments and agencies, as well as with Canada's allies, to defend and protect the supply chain and the critical infrastructure that enable the CAF's operational readiness.

The department continued to ensure that defence capabilities are designed to meet future threats by continually investing in partnerships and technologies that support CAF operations.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
4.1 Defence capabilities are designed to meet future threats	Extent to which the Future Security Environment assessment remains valid	2 on a 3 point rating scale*	31 March 2021	2	2	2
	Degree to which future security assessments and capability deductions remain coherent with those of our allies and partners	2 on a 3 point rating scale**	31 March 2021	2	2	2
	Degree to which future capabilities required to ensure an operational advantage over defence and security threats have been accounted for in defence plans	2 on a 3 point rating scale***	31 March 2021	2	2	2

Notes:

* During the Future Security Environment (FSE) validity period of four years, the FSE document will be assessed annually through internal Canadian Armed Forces foresight and allied collaboration analysis activities. Should these analysis activities identify significant issues, the Chief of Force Development will indicate the intent to produce an updated FSE with anticipated milestones.

** During the FSE validity period of four years, the Force Capability Plan and Investment Plan are reviewed annually through internal Canadian Armed Forces and allied collaboration analysis activities. Should these analysis activities identify significant issues, the Chief of Force Development will indicate the intent to produce updated documents with anticipated milestones.

*** During the FSE validity period of four years, the Force Capability Plan, Investment Plan and Force Development scenario sets are assessed annually through internal Canadian Armed Forces analysis activities. If significant issues are identified, the Chief of Force Development will indicate the intent to produce updated documents with anticipated milestones.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{xxxxiii}.

Departmental Result 4.2 – Defence and security challenges are addressed through innovative solutions

The IDEaS program continues to put forward challenges to seek alternative energy options and their potential use for operations including reducing electrical energy consumption at deployed camps, using cleaner fuels, designing more efficient soldier equipment, and providing more efficient power solutions for operations. These include contests as a competitive means of finding innovative solutions and awarding prizes to the best solutions derived from the innovation community. Three selected innovator teams are invited to begin building their prototypes. To that effect, IDEaS has conducted the third launch of its contest component which aimed at re-imagining how the CAF operate when deployed into the field. The initiative aimed at innovating on the production and use of energy, waste (in both liquid and solid form) as well as water supply for our troops while deployed.

In FY 2020-21, several science and technology activities targeted increased operational endurance and improved energy efficiencies for reduced electrical loads, fuel consumption, the water resupply or waste removal, and greenhouse gases for soldier, camp, fixed infrastructure and ship platforms. The science and technology work was conducted primarily through partnerships with Federal laboratories at the National Research Council and Natural Resources Canada's CanmetENERGY, and industry. Some highlights include:

- Data discovery of Halifax-class frigate that enabled identification of 10 percent fuel reduction target for Ship Platform Exploitation of Energy Datasets, funded through Greening Government Fund program; and
- An innovative integrated systems approach at remote northern and Arctic federal facilities, specifically, the North Warning System, to achieve greenhouse gas reductions throughout the year by doing an Advanced Microgrids towards Arctic Zero Emissions targets.

The IDEaS program has made progress over the last year. The Low Carbon Energy Generation for Heating Existing Buildings Test Drive was launched in January 2021 with an advanced procurement notice. IDEaS will acquire, install and operate a large-scale, low-carbon energy system integrated with an existing CAF building in Kingston, Ontario, to assess the effectiveness and costs of such technology.

Sapper Labs is the first innovator to advance from Competitive Projects Component 1b to Test Drive and was awarded \$7.5M. The company is testing their advanced cyber attribution technology in a real-world environment with the support of the Canadian Special Operations Forces Command. If successful, the solution would allow DND to achieve important cyber effects.

The IDEaS program launched a contest called “Pop-up City: Integrated Energy, Water and Waste Management Systems for Deployed Camps” which resulted in 111 proposals received from organizations across Canada covering each of these three technical domains (i.e. integration of energy, water and waste). Forty-two of these organizations have moved on to the second round of this contest, the aim of which is to combine solutions from each of these three technical domains into one overall integrated solution. This will lead to round three, during which selected innovators will receive a contribution agreement to cover the costs associated with building a prototype of their integrated solution and demonstrating its performance. Round four will assess which prototype produces the best results. The winner will receive a final prize of \$2M.

The [All Domain Situational Awareness Science and Technology program](#)^{cxxxiv} has delivered a final classified synthesis report on various concepts and technologies, and their degree of readiness and maturity, in order to provide advice on force development options for air and maritime surveillance. While a select few projects are still being completed by DRDC in partnership with Industry, the surveillance capabilities of a number of technologies have been demonstrated in the laboratory or in the field. Some of these technologies have been exploited and transitioned to operational capabilities; others are being used to define future major capital projects, such as Over-The-Horizon Radar, as part of a system-of-systems for North Warning System capability renewal. DND has also provided expertise and information to produce the first-ever bi-national Northern Approaches Surveillance Analysis of Alternatives report (classified) to be published by the United States for defence purposes and for informing NORAD modernization defence investments.

The department continued to implement the departmental Science, Technology & Innovation (ST&I) Functional Authority to leverage, align and optimize departmental ST&I resources through the departmental Science and Technology Investment Steering Committee. The department also continued to provide ST&I advice. The Defence Security, Science and Technology Program has:

- Enhanced evidence-based decision-making through a number of science and technology activities that will help DND and the CAF transition to a data-driven organization;
- Continued performing predictive analytics on financial data to improve how the Defence Team make in-year and out-year forecasts;
- Developed a model to forecast and visualize current and future National Procurement spending for all Equipment Program Managers and fleets to improve the planning, allocation and expenditure of National Procurement funds;
- Developed a systematic approach to prioritizing advanced analytics use cases to ensure that organizations begin using AI with the right projects;
- Deployed predictive analytics models, including an automated enrollment forecast model;

- Produced an initial case study on how to quantitatively integrate schedule risk into conventional DND cost risk analysis;
- Supported the Chief Data Officer by delivering priority use cases that advance analytics and DND and the CAF's Data Strategy; and
- Provided advice on science, technology and innovation as the next steps in adopting an enterprise approach to drive analytics adoption throughout DND and the CAF.

The department continues to collaborate and share its skills across organizations to mature data science tools and software. For example, in FY 2020–21, the department developed a prototype of an automated model for expenditure forecasting to predict Royal Canadian Navy (RCN) enrollments. This type of predictive modeling will improve defence enterprise resource management and can be extended to all CAF Regular Force occupations while being used for strategic reporting.

The Combat in the Virtual and Physical Environment Strategic Focus Area of the Defence Security, Science and Technology Program is continuing to invest in technology to improve Defensive Cyber Operations in the medium term. Initial scoping work is under way, in partnership with the Communication Security Establishment, for potential defence security, science and technology activities that enable DND-specific active cyber operations. The Combat in the Virtual and Physical Environment Strategic Focus Area has also conducted scoping work to detail challenges and prioritize investments in cyber intelligence and warning.

The Canadian Special Operations Forces Command's Innovation Program, PROMETHEUS, focused on:

- Foresight/Horizon Scanning: Insight gained to avoid strategic surprise and to focus more efficiently on force development. DND and the CAF partnered with the Creative Destruction Lab and collaborated with IDEaS and Innovation Solutions Canada to identify and adopt technologies to enable capability;
- Small Scale Directed Research: Cutting-edge ideation, research, experimentation, and prototyping through small-scale projects seeking solutions for real-time problems. DND and the CAF conducted academic engagement through Senior Clinic Projects and student employment (Virtual Force) in technical skills such as coding and programming; and
- Enabling Innovation Forward: Continuous outreach and engagement in innovation ecosystems. Partnered with Invest Ottawa, Venturelab and Canada Superclusters, DND and the CAF participated in Hack the North, Canada's largest hackathon.

To engage the industry and academia in developing solutions that close or mitigate capability gaps affecting the CAF, specifically North American Aerospace Defense Command (NORAD) operations, a series of three virtual NORAD webinars were conducted in FY 2020–21.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
4.2 Defence and security challenges are addressed through innovative solutions	% of initiatives and projects that are supported by Defence Science and Technology	At least 90%	31 March 2021	30%	30%	46.09%*
	% of Innovation for Defence Excellence and Security (IDEaS) projects that resulted in useful advice, adoption, integration or eventual procurement of a new defence and security capability	At least 20%	31 March 2022	Results not available New indicator as of 2018–19	5.5%	77.8%**

Notes:

* With the *Strong, Secure, Engaged* data review, an increase in initiatives supported by Defence Science and Technology were identified. The target will be revised through the next Departmental Results Framework review.

** In FY 2019–20, projects were still in their first phase of work or had just transitioned to a second phase of funding (Component 1b). Therefore, most solutions were still in the development stage. In FY 2020–21, projects began completing the second phase of funding (Component 1b), and their broader solutions were delivered to DND/CAF for consideration. Therefore, DND/CAF began to benefit from completed Component 1b projects.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{xxxxv}.

Budgetary financial resources (dollars)

2020–21 Main Estimates	2020–21 Planned spending	2020–21 Total authorities available for use	2020–21 Actual spending (authorities used)	2020–21 Difference (Actual spending minus Planned spending)
840,491,721	845,220,905	881,591,666	836,173,606	(9,047,299)

Human resources (full-time equivalents)

2020–21 Planned full-time equivalents	2020–21 Actual full-time equivalents	2020–21 Difference (Actual full-time equivalents minus Planned full-time equivalents)
2,223	1,883	(340)

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{xxxxvi}.

Procurement of Capabilities

Description

Procure advanced capabilities to maintain an advantage over potential adversaries and to keep pace with allies, while fully leveraging defence innovation and technology. Streamlined and flexible procurement arrangements ensure Defence is equipped to conduct missions.

Results

The Department of National Defence (DND) continued to procure advanced capabilities to maintain an operational advantage over potential adversaries and to keep pace with allies, while fully leveraging defence innovation and technology.

Effective defence procurement remained vital to ensuring that the Canadian Armed Forces (CAF) have the necessary range of capabilities required to protect and defend Canada and Canadians. To achieve this goal, it was necessary to reform Canada's procurement model, reducing complexity and redundancy, in order to ensure the timely delivery of projects. During FY 2020–21, the department:

- Supported Public Services and Procurement Canada (PSPC) and the Treasury Board Secretariat (TBS) in developing an enhanced logic model focused on performance management and evaluation strategies in support of the Risk-Based Contracting Pilot; the Materiel Group continued to work with organizations across the department as they prepare for enhanced contracting authorities; and
- Developed a Capability Requirements and Proposed Investments Summary that highlighted the capability deficiencies that affect North American Aerospace Defense Command (NORAD)'s ability to carry out its assigned missions, and identified potential investments to address current and emerging defence and security challenges; this Summary was also used to define *Strong, Secure, Engaged: Canada's Defence Policy (SSE) Initiatives 109 and 111, North Warning System renewal and NORAD Modernization*.

Gender-based analysis plus (GBA Plus)

The Defence Team continued to use GBA Plus to support the diagnosis of potential deficiencies and to improve the design of equipment and services procured for CAF members. Using GBA Plus helped us ensure that we are providing our people with equipment and services that are cost-effective and efficient because the development takes users' diverse needs into account. For example:

- When considering equipment design, workstation/console design, workplace layout, maintenance access and ease of maintenance, user interface design, human systems integration and other design requirements, suppliers were asked to use anthropometric data and to gather and use other types of data on the gender, sex and other identity factors of the system's intended users and maintainers. This allowed us to identify potential for differential impact of system elements on humans based on gender and identity factors; and
- When identifying requirements for new skills, manuals, training courses, requirements for training facilities, etc., suppliers were asked to apply GBA Plus findings, and undertake research and consultations to understand the potential for differential issues of access, barriers or privileges experienced by those who will be trained in order to inform the training design and requirements.

The [Soldier Operational Clothing and Equipment Modernization](#)^{cxvii} initiative aims to deliver an integrated suite of modernized operational clothing, personal protective equipment, and load carriage equipment that focuses on GBA Plus and improving soldiers' performance and comfort. In FY 2020–21, the initiative sought to apply an iterative, developmental approach that relies on evergreen requirements that can be updated to leverage the latest advancements in the industry.

Experimentation

PSPC, TBS and DND established a working group and developed options for a risk-based contract approval process for defence procurements where the financial value exceeds PSPC's existing limits.

The Risk-Based Contracting Pilot was launched in November 2018 and lasted for 18 months was initially set to expire in April 2020. Based on the pilot's demonstrated success, Treasury Board approval was obtained in June 2020 to extend the pilot for five years to March 2025. The three organizations involved are working to enhance the supporting pilot framework.

Additional Defence-related experimentation activities are outlined in this report under [Core Responsibility 4 – Future Force Design](#).

Key Corporate Risk(s)

There were many risks associated with the Procurement of Capabilities Core Responsibility. Three of the Key Corporate Risks are articulated below:

Materiel Procurement – There was a risk that DND and the CAF may have difficulty procuring materiel capabilities at the right level to support operations.

IT Procurement – There was a risk that DND and the CAF may have difficulty procuring information technology capabilities at the right level to support operations.

Materiel Maintenance – There was a risk that DND and the CAF may have difficulty maintaining its materiel capabilities at the right level to support operations.

The risks above can affect the department's ability to achieve the Departmental Results of the Procurement of Capabilities Core Responsibility.

As the Defence Departmental Results Framework reflects a chain of delivery from conceiving of the required armed forces to developing them and then executing operations, the activities to mitigate the risks to the Procurement of Capabilities Core Responsibility can also be found in other Core Responsibilities, which deliver building blocks that enable the results of Procurement of Capabilities.

Many of the preventative and mitigating controls for these risks are articulated as activities of each Departmental Result below.

Departmental Result 5.1 – Defence procurement is streamlined

In FY 2020–21, DND was ready and equipped to conduct missions with our streamlined and flexible procurement arrangements and newly introduced processes as follows:

- Ensuring newly introduced processes allow defence project timelines to be assessed in order to measure success:
 - Over the course of FY 2020–21, the Defence Industry Advisory Group ensured that communication with the defence industry was more transparent and timely in a period of great uncertainty caused by COVID-19. In this context, steps were taken to extend the Defence Industry Advisory Group to include more defence suppliers, and regular updates were provided to the Deputy Minister and the Minister of National Defence regarding the COVID-19-related challenges faced by the industry.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
5.1 Defence procurement is streamlined	% of projects that meet the approved project development and approval timelines (low risk and low complexity projects)	100%	31 March 2021	Results not available New indicator as of 2018–19	Results not available	67%*
	% of goods and services contracts that are awarded within established performance targets	100%	31 March 2021	100%	92%	92%**

Notes:

* Initiatives such as the Tailored Project Approval Process (formerly known as Project Approval Process Renewal) continued to result in reduced approval process times, specifically in the later phases of the projects, eliminating the requirement for multiple Expenditure Authority approvals by the Minister of National Defence.

** Target not met due to factors such as COVID. In the early phase of the pandemic connectivity to work remotely was limited. Access points were shared amongst many users, ultimately having an impact on the department's ability to execute procurement within the set timelines. The priority was given to those requirements in direct support to OP Laser (or COVID-19 efforts).

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{xxxviii}.

Departmental Result 5.2 – Defence equipment acquisition is well-managed

- With the ongoing efforts to professionalize the workforce by promoting access to specialized training and coordinating competency development, the following activities were completed or advanced in FY 2020–21:
 - Developed a high-level professionalization concept as an academic project with the Telfer School of Business;
 - Conducted an environmental scan of all classifications and communities of practices through the professionalization working group in order to improve understanding of the different needs;
 - Created a materiel management functional community of practice; a plan to professionalize this community is in development;
 - Launched a three-phased organizational transformation project called “Competency-Based Project Management Organization” to transition project management roles to a standardized model; Phase 1: Problem Identification is complete and delivered an organizational assessment that includes an environmental scan;
 - Delivered 37 648 Materiel Acquisition and Support-related training qualifications;
 - Completed extensive Materiel Acquisition and Support curriculum updates and implemented new content across all communities on more than 20 different courses;
 - Created a new learning and development curriculum for Sponsor Force Generation staff;
 - Increased project management competencies within DND by qualifying 92 new DND project managers for a total of 485 personnel holding a DND project manager qualification;
 - Improved project management acumen by sponsoring six personnel to complete the Master of Business in Complex Project Leadership and 31 personnel achieving the Certificate in Complex Project and Procurement and Leadership; and
 - Improved scheduling practices for project management teams by training 60 project management practitioners in advance scheduling practices. Initiated the third-party

assessment of the Major Capital Project scheduling initiative currently being conducted by KPMG.

Highlights from FY 2020–21 on the department's major and key equipment projects:

- The [Canadian Surface Combatant](#)^{cxix}: The work to complete the Requirements Reconciliation of the Canadian Surface Combatant project continued. The final administrative action is under way to complete this work in FY 2021–22. The project achieved a successful joint (DND/PSPC) corporate submission to attain the authorities necessary to acquire the required long-lead items to advance the design in order to support the start of construction in FY 2023–24, and to design and build a Land-Based Test Facility that is essential to supporting ship design, integration, and construction and acceptance activities. Throughout FY 2020–21, the project made progress on the preliminary design. Completion is targeted for 2022;
- [Arctic and Offshore Patrol Ships](#)^{cxl}: Construction continued on the second Arctic and Offshore Patrol Ship, the future Her Majesty's Canadian Ships (HMCS) *Margaret Brooke*, although required COVID-19 safety protocols did affect progress. Based on the current schedule, the future HMCS *Margaret Brooke* is expected to be delivered in 2021, noting that timelines remain tentative as the pandemic continues. During FY 2020–21, work continued on the third Arctic and Offshore Patrol Ship, the future HMCS *Max Bernays*, and work began on the fourth ship, the future HMCS *William Hall*. Canada took delivery of HMCS *Harry DeWolf* in July 2020. Canada assumed care and custody of the ship as the final stages of the systems' installation progressed for the first ten weeks that the ship was being berthed at HMC Dockyard;
- [Fixed Wing Search and Rescue Aircraft Replacement Project](#)^{cxli}: Despite ongoing challenges associated with international travel, the Fixed Wing Search and Rescue Aircraft Replacement Project accepted an additional four aircraft in Spain, bringing the total number of aircraft accepted by Canada to five. The first aircraft was delivered to Canada from Spain in 2020. Six of the seven training devices were accepted, after which, aircrew and maintainer training began in the newly constructed CC-295 Training Centre in Comox, British Columbia. Minor construction on the training centre continues. This construction is expected to be complete in 2021;

Fixed Wing Search and Rescue Aircraft Replacement

CC-295



-
- [Joint Support Ship](#)^{cxlii}: The Joint Support Ship project received implementation authorities in February 2020. Supporting contracts were amended to continue activities until the build contract was awarded in June 2020. Shipyard activities were impacted by COVID-19, with production

continuing throughout the pandemic. By the end of FY 2020–21, 111 of 123 blocks were under construction for the first Joint Support Ship, the future HMCS *Protecteur*;

- **Future Fighter Capability Project**^{cxliii}: In May 2020, the Future Fighter Capability Project sought to design and build a new fighter jet facility at 4 Wing Cold Lake, Alberta. This facility will host three fighter squadrons and include space for daily operations, maintenance, and training. In June 2020, Canada also sought to design and build a new fighter jet facility at 3 Wing Bagotville, Quebec. This facility will host two squadrons and will also include space for daily operations, maintenance and training. In July 2020, Canada received bids from all suppliers currently eligible to participate in the future fighter competitive procurement process. Proposals are being rigorously assessed on elements of capability, cost and economic benefits. The evaluation also includes an assessment of bidders' impact on Canada's economic interests. In August 2020, a \$9.2M design contract for a Fighter Squadron Facility in Cold Lake, Alberta, was awarded, and a similar contract of \$12.1M was awarded in September 2020 for a Fighter Squadron Facility in Bagotville, Quebec. These contracts enabled design and site preparation work to begin for infrastructure that is not aircraft specific;
- **Remotely Piloted Aircraft System**^{cxliv}: Throughout FY 2020–21, the project team for the Remotely Piloted Aircraft system engaged the two qualified suppliers through the Review and Refine Requirements process to develop the draft request for proposal. The initial draft request for proposal was issued to qualified suppliers for review and feedback in November 2020; the request for proposal is expected to be issued in FY 2021–22;
- **Medium Support Vehicle System**^{cxlv}: Deliveries of all equipment to units across Canada for the Medium Support Vehicle System project were completed. A five-year in-service support contract extension was awarded in July 2020. Fleet management responsibilities were transferred from the project to the support organization in summer 2020. Full operational capability was reached in February 2021;

Medium Support Vehicle System Project

Standard Military Pattern Truck



- **Logistics Vehicle Modernization**^{cxlvi}: The Logistics Vehicle Modernization project released a draft request for proposal in phases to six qualified suppliers. Engagements with qualified suppliers were held at each major release to solicit feedback. The project expects to release the final request for proposal by the third quarter of FY 2021–22;
- **Armoured Combat Support Vehicles**^{cxlvii}: In December 2020, the first Armoured Combat Support Vehicle, a Troop Cargo Vehicle variant, was produced and accepted by Canada. Qualification

testing on the first variant commenced in early 2021. Design and production of the second and third variants, Ambulance and Command Post, significantly progressed in FY 2020–21;

- **CP-140 Aurora Incremental Modernization Project^{cxlviii}**: The Aurora Incremental Modernization Project Blocks I, II and III are complete and have delivered a modernized CP-140 Intelligence, Surveillance and Reconnaissance, and Anti-Submarine Warfare capability to the Royal Canadian Air Force. Block IV has delivered three modified aircraft (only one of which has a fully capable self-defence system). Three more aircraft currently undergoing modification; and
- **CH-149 Cormorant Mid-Life Upgrade Project^{cxlix}**: The Cormorant Mid-Life Upgrade Project received a mid-May 2020 contractor proposal, which proved unaffordable. The project began investigating alternate solutions, which delayed the target implementation date. The CH-149 fleet averaged 99.5 percent Search and Rescue availability at each base during the year and supported aircrew training.

For more information on key equipment projects, please visit the Department of National Defence and the Canadian Armed Forces' [Defence equipment purchases and upgrades^{cl}](#) webpage.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
5.2 Defence equipment acquisition is well-managed	% of capital equipment projects that remain in approved scope	100%	31 March 2021	100%	100%	94.12%*
	% of capital equipment projects that remain on approved schedule	100%	31 March 2021	81.25%	100%	94.12%*
	% of capital equipment projects that remain within approved expenditure authority	100%	31 March 2021	100%	100%	94.12%*

Notes:

* Of the 17 capital equipment projects, 16 achieved the target. However, the Cormorant Mid-Life Upgrade Project has had some challenges during FY 2020–21 and will be looking into alternate solutions to meet its needs. These challenges have affected the Project's scope, schedule, and expenditure authority.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase^{cl}](#).

Departmental Result 5.3 – Defence information technology acquisition is well-managed

Throughout FY 2020–21, DND continued to deliver on key information management and information technology capital projects as outlined in SSE despite the challenges of COVID-19. Since project reporting controls are in place to inform senior management when projects face challenges, appropriate steps are promptly taken to do what is required to resolve issues. Senior management was able to provide guidance related to COVID-19 challenges to minimize the impact to projects.

The Defence Team continued to adopt project management practices by engaging early with industry and delivery partners, and engaging closely with other government departments despite the challenges of COVID-19. Once business processes and technologies were adapted to the changed circumstances, efforts were able to resume to keep projects on track.

The department continued to work on delivering full operational capability for the following information management projects in FY 2021–22:

- Secure Iridium Replacement Initiative;
- Digital Biometrics Collection and Identity Management;
- Polar Epsilon 2;
- Defence Cryptographic Modernization Project – Network Encryption Family;
- Defence Cryptographic Modernization Project – Identification Friend or Foe; and
- Mercury Global Project.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
5.3 Defence information technology acquisition is well-managed	% of information technology projects that remain in approved scope	100%	31 March 2021	94%	100%	100%
	% of information technology projects that remain on approved schedule	100%	31 March 2021	88%	94%	76%*
	% of information technology projects that remain within approved expenditure authority	100%	31 March 2021	100%	100%	100%

Notes:

* Early in this reporting period, COVID-19 impacted the ability of projects to stay on their approved schedules. Projects were able to get back on track after only a few months, once business processes were established and personnel became accustomed to working in a distributed environment.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{clii}.

Departmental Result 5.4 – Supplies are available and well-managed

In FY 2020–21 the department enhanced materiel accountability with the following notable achievements:

- Developed the Defence Supply Chain Performance Measurement Framework which will be rolled-out across National Defence during FY 2021–22. This will inform decision-making about subjects such as responsiveness, accuracy, cost and equipment readiness; and
- Advanced a series of integrated initiatives to modernize business processes executed within the Defence Supply Chain. Instructions were published to ensure that vendors apply unique identification marks to high-value and/or controlled items prior to their introduction to the supply system, and a contract was awarded to mark items held in legacy inventory. This effort will establish a critical mass of markings (similar to bar codes in a store) to support automatic information technology adoption, which will deliver handheld barcode reading technologies to the supply community in 2024. Efforts to remediate data and better integrate business functions within the supply system have also progressed in their design. Together, these initiatives will improve asset visibility and enhance the supply chain's ability to respond to threats and emergencies.

National Procurement is the term given to DND Corporate accounts aligned with the in-service sustainment and disposal of aerospace, land and maritime equipment, as well as ammunition and

common use materiel, such as uniforms and test equipment. In-service sustainment includes maintenance, engineering support, engineering changes and inventory replenishment. The department's materiel group is responsible for executing the National Procurement Program, which was over \$3.245B in FY 2020–21.

The department's materiel group continued to provide equipment support to maritime, land and aerospace equipment, as well as ammunition and common use materiel, such as uniforms and test equipment. Equipment support includes the maintenance, engineering support, engineering changes and inventory replenishment required for equipment to be available to support CAF training and operational requirements.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
5.4 Supplies are available and well-managed	% of stock that is unavailable to meet forecasted demand	Below 7.93%	31 March 2021	5.72%	7.61%	7.36%
	% of stock disposed that was identified as surplus	Greater than 23%	31 March 2021	Results not available New indicator as of 2020-21*	Results not available New indicator as of 2020-21*	33.4%

Notes:

* Result not available. For additional context, see the Department of National Defence and the Canadian Armed Forces' 2018–19 Departmental Results Report.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase^{cliii}](#).

Budgetary financial resources (dollars)

2020–21 Main Estimates	2020–21 Planned spending	2020–21 Total authorities available for use	2020–21 Actual spending (authorities used)	2020–21 Difference (Actual spending minus Planned spending)
3,907,432,104	3,910,791,611	4,701,330,194	4,119,915,713	209,124,102

Human resources (full-time equivalents)

2020–21 Planned full-time equivalents	2020–21 Actual full-time equivalents	2020–21 Difference (Actual full-time equivalents minus Planned full-time equivalents)
2,176	2,525	349

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase^{cliv}](#).

Sustainable Bases, Information Technology Systems and Infrastructure

Description

Develop and manage modern, operational and sustainable bases and infrastructure. Contribute to the achievement of federal environmental targets.

Results

The Defence Team continued to effectively manage the largest infrastructure portfolio in the federal government. Maintaining modern and sustainable infrastructure that supports military requirements, improves efficiency, and reduces our energy and environmental footprint is critical to the military's operational success. Providing our military personnel with the facilities and tools they need to perform their work is one of our foremost priorities — we must deliver. During FY 2020–21, the department:

- Effectively maintained essential infrastructure throughout the year while facing the challenges of COVID-19; this included taking steps to ensure that our personnel were safe at work, such as enhanced cleaning measures and modified work spaces; these steps helped the Defence Team continue to conduct and support operations in a continually changing environment;
- Invested more than \$287M in lighting, heating systems and other energy efficiency upgrades across the country; the Canadian Forces Housing Agency invested in whole-house renovations and the construction of energy-efficient housing; these initiatives reduced the Department of National Defence (DND)'s carbon footprint and support the low-carbon government targets outlined in the Federal Sustainable Development Strategy and the [2020–2023 Defence Energy and Environment Strategy](#)^{clv};
- Awarded a new \$86.8M energy performance contract at Canadian Forces Base (CFB) Kingston, Ontario, which will reduce energy costs by approximately \$5.6M annually or 33 percent, and lower greenhouse gas emissions by over 5 800 tonnes per year or 36 percent; and
- Advanced 20 of the 41 divestment projects; by divesting and demolishing older, non-energy efficient properties and replacing facilities with new EnerGuide and Leadership in Energy and Environmental Design (LEED) approved properties, DND continues to improve its portfolio, in support of its commitment to reduce greenhouse gas emissions.

Defence IT specialists in partnership with Shared Services Canada (SSC) expanded DND and the CAF's ability to [work remotely](#)^{clvi}. First, SSC and DND collaborated to expand DND's Virtual Private Network (VPN) connections by 300 percent, increasing from 16 000 to 48 000 connections. Second, DND IT Specialists quickly manoeuvred to provide the Defence Team with Defence 365, which is the DND version of Microsoft Office 365, establishing accounts for the entire workforce to use, including MS Teams and One Drive. This allowed the Defence Team to continue to operate during the COVID-19 pandemic.

DND continued to deliver enterprise-level information technology (IT) systems and infrastructure to address emerging cyber security challenges, including:

- An upgrade for all of DND users to a high assurance identity and authentication service on the department's IT unclassified networks and compatible with Government of Canada identify and authentication services;
- A pilot project to introduce an encrypted identity and authentication capability on SSC-managed mobile devices;
- A technical solution for identification and authentication to access classified networks;
- Continued expansion of a tool to assess vulnerabilities in DND Command and Control (C2) deployed IT networks, allowing DND and the CAF to prioritize and plan remediation actions; and
- The strengthening of cyber security characteristics of remote computing devices and the department's IT systems access to a non-public cloud environment.

DND continued to support SSC in delivering Government of Canada IT infrastructure modernization, as it relates to supporting DND and the CAF's unclassified IT infrastructure, by providing expert cyber security technical expertise and validation.

The department continued to work with SSC to improve the sustainability of IT systems that SSC manages for the Government of Canada, including core network infrastructure, telecommunications, networking and collaboration, mobile services and data centre reliability by:

- Continuing to work closely with SSC to consistently improve SSC's service delivery to DND and the CAF and by ensuring that DND's demand for service from SSC is clearly prioritized;
- Providing cyber security technical expertise and validation of DND unclassified systems for SSC projects; two such projects include the relocation of some of the department's IT unclassified systems to enterprise data centres and the Government of Canada IT infrastructure modernization; and
- Providing feedback on requests for changes to critical IT infrastructure components that relate to the design and implementation of SSC application hosting environments in order to migrate to modern hosting platforms; examples include:
 - Integrating and adapting changes to the migration from BlackBerry devices to modern Android/iOS devices and the implementation of the BlackBerry Messenger Enterprise to support protected chat;
 - Working with SSC to increase bandwidth capacity to support the increase in remote work as a result of the COVID-19 pandemic; and
 - Collaborating with SSC on their networking proposals related to the interoperability between the United States and Canada, and the core infrastructure between Government of Canada departments and the cloud.

DND delivered the following capabilities to support C2 networks:

- Implemented an initial capability to support Joint Intelligence, Surveillance and Reconnaissance and Open Source Intelligence;
- Enhanced the remote connectivity to the core validation capability that supports the delivery of critical Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance solutions;
- Enabled videoconferencing in support of operations in Latvia and Iraq;
- Increased the ability for remote DND and CAF workers to collaborate (e.g. voice/video and chat, document sharing) in order for the Defence Team to continue business during the pandemic; and
- Completed key video teleconferencing installations to support DND and the CAF C2 in Ottawa, Trenton and Washington.

DND and the CAF made IT infrastructure improvements that addressed the communications and information exchange capabilities within the Five Eyes environment by:

- Enhancing the capability of the Canadian Defence Red Switched Network to maintain and improve interoperability with our partners; and
- Upgrading the information exchange network that enables email, web, chat, voice and video communications between Five Eyes Nations.

United Nations' 2030 Agenda for Sustainable Development and the UN Sustainable Development Goals (SDGs)

In support of the government's greening commitments, we launched the [2020–2023 Departmental Energy and Environment Strategy](#)^{clvii} (DEES). This plan will help DND meet its greening targets, improve energy efficiency, integrate climate change adaptation into our programs, maintain sustainable real property, and strengthen our green procurement processes. The DEES continues to build on environmental commitments in *Strong, Secure Engaged: Canada's Defence Policy* and is aligned with the goals of the [Federal Sustainable Development Strategy](#)^{clviii} and the [United Nations Sustainable Development Goals](#)^{clix}.

Progress was made on the following notable targets:

- Assessing and remediating contaminated sites with a goal to reduce DND's contaminated sites liability by an average of 10 percent per year by 2023;
- Reducing greenhouse gas emissions by 40 percent below 2005 levels by 2025 (infrastructure and commercial light-duty fleet) and achieving net-zero emissions by 2050 (includes emissions from all platforms—air bodies, ships and land-based military pattern vehicles);
- Ensuring that, when possible, all of DND's commercial light-duty vehicle fleet purchases are zero-emission vehicles or hybrid, with a zero-emission vehicle procurement target of 50 percent by 2023;
- Developing a climate change risk assessment framework and studying the impacts of climate change on CAF activities by 2023; and
- Updating the DND Green Building Directive to integrate Greening Government Strategy commitments related to net-zero emissions, climate change adaptation, and construction and demolition waste.

Experimentation

Defence-related experimentation activities are outlined in this report under [Core Responsibility 4 – Future Force Design](#).

Key Corporate Risk(s)

There are many risks associated with the Sustainable Bases, Information Technology Systems and Infrastructure Core Responsibility. Two of the Key Corporate Risks are articulated below:

Physical Environment – There is a risk that changes to the physical environment of Canada and the world will impact the type, frequency and conduct of DND and CAF activities.

Infrastructure Procurement – There is a risk that DND and the CAF may have difficulty procuring/building infrastructure at the right level to support operations.

The risks above can affect the department's ability to achieve the Departmental Results of the Sustainable Bases, Information Technology Systems and Infrastructure Core Responsibility.

As the Defence Departmental Results Framework reflects a chain of delivery from conceiving of the required armed forces to developing them and then executing operations, the activities to mitigate the risks of the Sustainable Bases, Information Technology Systems and Infrastructure Core Responsibility can also be found in other Core Responsibilities, which deliver building blocks that enable the results of Sustainable Bases, Information Technology Systems and Infrastructure.

Adopting climate-resilient building codes developed by National Research Council Canada by the end of 2021.

Departmental Result 6.1 – Naval, Army and Air Force Bases enable military operations and defence activities

CAF bases and wings delivered critical services to enable and support the whole-of-government response to the COVID-19 global pandemic. A number of base locations established emergency facilities to prepare to accommodate hundreds of people in a pandemic setting—from evacuating a community during a forest fire to temporarily housing a large group of Canadians returning to the country. Base support services enabled essential personal protective equipment to be transported across Canada and, as a priority for enhancing Defence's public health measures, personnel were engaged in the production of non-medical masks.

New policies and procedures were implemented to protect base and wing personnel and the community, to maintain operational capabilities, and to limit the spread of COVID-19. Support services were adapted according to restrictions and limitations, and provincial requirements. With the implementation of protective and public health measures, some routine support services were reduced, such as transportation, food services and accommodations.

To continue to safely and effectively deliver food services, bases and wings adapted various measures, and the Canadian Forces Food Services Manual was updated to highlight pandemic safety measures. Several base and wing dining facilities were closed for periods of time, and takeout or premade meals were provided. While plans to promote the National Standardized Cycle Menu were placed on hold, bases and wings did continue to provide healthy and vegetarian menu choices.

The Canadian Army (CA) continued to provide general and specialized base support through its 21 bases to 55 000 Defence Team members. Almost a third of land base support was directed to non-CA organizations. For example, the relatively small base in Montreal supports elements from six other CAF commands. Support was adapted according to COVID-19 restrictions/limitations and provincial requirements. Some routine services, such as accommodations and transportation, were drastically reduced following the implementation of public health measures. Other support requirements that emerged during the year were also dependent on the locations and the services they provide, notably in support of Operation LASER in the provinces of Quebec and Ontario. Tailored and progressive implementation of protective measures occurred across all land bases.

For information, refer to the following webpages:

- [Naval bases](#)^{clx}
- [Army bases](#)^{clxi}
- [Air Force wings](#)^{clxii}

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
6.1 Naval, Army and Air Force Bases enable military operations and defence activities	% of single quarters accommodations that can be used	90%	31 March 2021	Results not available New indicator as of 2020-21	Results not available New indicator as of 2020-21	69%*
	% deviation of average daily meal cost from the standard allowance	Less than 15%	31 March 2021	Results not available New indicator as of 2020-21	Results not available New indicator as of 2020-21	12%

Notes:

* Due to COVID-19 restrictions, a percentage of single quarters accommodations were marked as "not available" that would have otherwise been available for use. In some cases, as many as 50% of single quarters were taken out of rotation and an additional percentage was reserved specifically for quarantine. Due to these circumstances, the FY 2020-21 results are not indicative of the normal conditions of accommodations services at bases and wings.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{clxii}.

Departmental Result 6.2 – Defence infrastructure is well-managed throughout its lifecycle

The Defence Team continued to improve infrastructure management in FY 2020-21 and achieved the following targets:

- Reduced the overall energy consumption of the housing portfolio and DND's carbon footprint through housing renovations and construction of new efficient residential housing units;
- Demolished over 70 obsolete buildings that were beyond economic repair on bases and DND establishments. The money previously used to maintain these buildings will be reinvested in the infrastructure portfolio to support military operations, activities and equipment;
- Explored opportunities to improve service delivery practices via the National Real Property Service Management Strategy. Key pillars include performance-based service delivery, service standards and better leveraging private sector expertise, tools and technology;
- During the COVID-19 pandemic, DND continued to provide safe access to accommodations to CAF personnel and their families, ensuring that maintenance and repairs were carried out promptly and safely at all housing sites across Canada; and
- Invested in 36 projects to recapitalize or retrofit the interiors or exteriors of residential housing at 17 CAF housing sites across Canada.

Major projects highlights from FY 2020-21 include:

- Awarded design contracts for [future fighter infrastructure](#)^{clxiv} in [Bagotville, Quebec](#)^{clxv}, and [Cold Lake, Alberta](#)^{clxvi} to provide Royal Canadian Air Force (RCAF) personnel with the infrastructure required to operate, maintain and store the new aircraft being procured under the Future Fighter Capability Project;
- Awarded a new \$86.8M energy performance contract at Canadian Forces Base (CFB) Kingston, Ontario, which will reduce energy costs by approximately \$5.6M annually or 33 percent and lower greenhouse gas emissions by over 5 800 tonnes per year or 36 percent;
- Began construction of a new [\\$18M health services centre for 22 Wing North Bay, Ontario](#)^{clxvii}, integrating medical, dental, physiotherapy and mental health services in a single location to support the well-being of CAF personnel;
- Completed a new [\\$57.8M training facility at CFB Halifax, Nova Scotia](#)^{clxviii} to meet the educational requirements of a 21st century navy;
- Completed a new [\\$48.5M base sustainment facility at CFB Kingston, Ontario](#)^{clxix} that consolidates maintenance, transport and supply functions and provides personnel with more space for storage, maintenance work and transport operations;
- Began construction on a new \$131M project to provide the 4 Engineer Support Regiment at CFB Gagetown, New Brunswick, with a new purpose-built, modern and green regimental headquarters in which to work and train;
- Began construction on phase one of a three-phase, [\\$272M project to upgrade Defence Research and Development Canada Valcartier Research Centre, Quebec](#)^{clxx}
- Began construction on a new [\\$88.1M facility for the Royal Canadian Dragoons in Petawawa, Ontario](#)^{clxxi} to provide the regiment with enhanced vehicle maintenance, storage, logistics and training areas to increase collaboration and support daily operations; and
- Completed two new apartment buildings at CFB Borden, Ontario, which will provide a modern housing option for over 12 CAF families at the defence establishment.

For more information, consult the [Investing in Infrastructure and Infrastructure Projects](#)^{clxxii} webpage.

New apartment buildings at CFB Borden, Ontario



(Photo credit: Renokrew)

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
6.2 Defence infrastructure is well-managed throughout its lifecycle	% of infrastructure in suitable condition	60%–80%	31 March 2021	66%	64%	64.49%
	% of maintenance and repair investment in relation to the infrastructure portfolio value	At least 1.4%*	31 March 2021	1.05%	1.01%	0.71%**
	% of the total real property value that is identified as surplus	Between 1% and 2%	31 March 2021	0.82%	2.59%	1.78%

Notes:

* This value reflects an industry benchmark for best practices in sustainment of infrastructure portfolios.

** Maintenance and repair funding levels were insufficient to reach the 1.4% target. In addition, some funds originally allocated to maintenance and repair spending were transferred to other infrastructure operating priorities.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{clxxiii}.

Departmental Result 6.3 – Defence activities are carried out in a safe and environmentally responsible manner

The Defence Team continued to make significant progress in improving the energy efficiency of our operations. Ongoing investments in green technologies and innovative approaches to business management are helping us meet our sustainability commitments. In FY 2020-21, the department achieved the following:

- Published our renewed [Defence Energy and Environment Strategy](#)^{clxxiv} (DEES 2020-2023), which outlines our energy and environmental commitments—reducing our energy waste and

environmental footprint, using cleaner energy sources, and better managing our energy and environmental performance;

- Supported Public Services Procurement Canada's (PSPC) efforts to secure green power purchase agreements, which will help provide clean power for infrastructure at bases and wings; and
- Achieved LEED Silver certification for all new construction and major recapitalization projects.

Major performance highlights from FY 2020-21 include:

- Thirty-eight percent reduction in greenhouse gas emissions for our infrastructure and commercial light-duty fleet since 2005;
- Thirty-four percent of our light-duty vehicle fleet now runs on hybrid, plug-in hybrid and/or electric technology; and
- Ten percent of reduction in contaminated sites liability, exceeding the target of seven percent annually.

For more information, refer to the [Greening Defence](#)^{clxxv} webpage.

DND is bound by the Federal Sustainable Development Act and was required to develop a 2020 to 2023 Departmental Sustainable Development Strategy. DND has developed its corresponding FY 2020-21 Departmental Sustainable Development Strategy Report, including applicable reporting on green procurement activities. This report can be found on DND's website.

Results achieved

Departmental results	Performance indicators	Target	Date to achieve target	2018–19 Actual results	2019–20 Actual results	2020–21 Actual results
6.3 Defence activities are carried out in a safe and environmentally responsible manner	% of Defence Energy and Environment Strategy commitments that are met or exceeded	At least 80%	31 March 2021	67%	82%	100%
	% of greenhouse gas emissions reduction relative to a 2005 baseline	At least 40%	31 March 2030	32%	31.3%	38%*
	% of light-duty vehicle fleet that is hybrid, plug-in hybrid and/or electric	At least 30%	31 March 2021	27%	33%	34%
	% of reduction in contaminated sites liability based on the closing liability of the previous year	At least 7%	31 March 2021	19.8%	16.5%	10%

Notes:

* FY 2020-21 saw a large reduction in greenhouse gas emissions - 38% from 2005 levels (excluding military fleets). This drop in emissions is mainly attributed to COVID-19 affecting operations and a mild winter that reduced heating costs. Once normal operations resume, emissions are expected to rise.

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{clxxvi}.

Budgetary financial resources (dollars)

2020–21 Main Estimates	2020–21 Planned spending	2020–21 Total authorities available for use	2020–21 Actual spending (authorities used)	2020–21 Difference (Actual spending minus Planned spending)
3,665,573,962	3,680,697,534	4,165,436,326	4,185,750,629	505,053,095

Human resources (full-time equivalents)

2020–21 Planned full-time equivalents	2020–21 Actual full-time equivalents	2020–21 Difference (Actual full-time equivalents minus Planned full-time equivalents)
14,843	15,944	1,101

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{clxxvii}.

Internal Services

Description

Internal Services are those groups of related activities and resources that the federal government considers to be services in support of programs and/or required to meet corporate obligations of an organization. Internal Services refers to the activities and resources of the 10 distinct service categories that support Program delivery in the organization, regardless of the Internal Services delivery model in a department. The 10 service categories are:

- Acquisition Management Services;
- Communication Services;
- Financial Management Services;
- Human Resources Management Services;
- Information Management Services;
- Information Technology Services;
- Legal Services;
- Material Management Services;
- Management and Oversight Services; and
- Real Property Management Services.

Results

Financial management and planning

In an effort to meet the objectives laid out in [Strong, Secure, Engaged: Canada's Defence Policy \(SSE\)](#)^{clxxviii}, the Department of National Defence (DND) and the Canadian Armed Forces (CAF) advanced oversight works through effective and efficient financial management and reporting. These key support services functions worked to critically enable the successful delivery of projects, programs and equipment. As each SSE initiative is delivered, operational support functions generate incremental increases in many areas of financial management. DND and the CAF continues to monitor and deliver stewardship and accountability in the rollout of SSE initiatives and as a leader in financial management and operational planning.

In FY 2020-21, DND and the CAF worked collaboratively to foster innovation, modernize tools and data collection techniques, and optimize policies and processes. In particular, the implementation of the Financial Planning and Forecasting tool value case fosters innovation by increasing DND and CAF's understanding of needs definition and enhances the provision of evidence-based information required to inform decision-making. Processes related to Financial Planning and Forecasting tool have provided particular value in aligning and standardizing departmental in-year forecasting. By refining systems and tools into a single source of data and information DND and the CAF has made improvements to guarantee knowledge management, including the reliability of our data and our ability to align resources and strengthen accountability. These improvements enable DND and the CAF to more effectively ensure that oversight and accountability, specifically towards enhanced management of resources, are supported through the administration of an internal financial control framework.

Management and oversight services

A [series of town halls](#)^{clxxix}, panel discussions and lunch and learns, facilitated by an external consultant, were used to explore themes relating to anti-Black racism and related topics. In addition, the Materiel Group hosted a panel discussion with members of various diversity groups to address questions and concerns.

A new capability was created in March 2021 to provide senior management with advice on diversity and inclusion. The capability led change management initiatives to create a diverse and inclusive workplace. In addition, a Civilian Diversity and Inclusion Action Plan was developed for approval.

The Employee Development Program engagement increased its emphasis on diversity and inclusion in role-play/scenario development for the Leadership Achievement Assessment, which is being developed to replace the Simulations for Identification of Leadership.

Updates on diversity events, including Black History Month, International Women's Day and recommended/required training, were communicated to all staff via informal communiqués and the DND intranet. Communications regarding these topics remains an ongoing agenda item for senior management meetings, with additional resources added to the intranet, supported by the creation of a Diversity and Inclusion Advisory Group.

Public Service Employment Survey Action Plan development and follow-up was initiated. Diversity was prioritized and actioned as part of the 2019 Public Service Employment Survey Action Plan.

In early FY 2020-21, the department approved the creation of the Departmental Litigation Oversight (DLO) capability: an oversight function to manage and coordinate activities related to the growing number of complex, multi-branch litigations. In FY 2020-21, DLO implemented the approved structure to deliver the expanded mandate. In its role, DLO worked closely with the Canadian Forces' Legal Advisor, Department of Justice litigators, clients and other federal government partners to support the department's response to litigation.

In addition to supporting overall compliance with the [LGBT Purge final settlement](#)^{clxxx}, and assisting in other legal cases still in negotiation or litigation, DLO was designated the official DND client organization for the department's sexual misconduct settlement. As a result, DLO coordinated all aspects of DND and CAF obligations under the settlement agreement, including oversight and governance of the settlement agreement (claims administration, support to the independent Administrator and Assessors, supporting internal experts in developing the settlement measures and sponsoring Treasury Board submissions).

The department continued to meet its mandate to conduct independent evaluations, audits and investigations. Pushed by COVID-19, DND adapted its approach to meeting emerging risks by initiating several additional engagements that examined DND and the CAF's response to the COVID-19 pandemic as well as completing other engagements that were planned for FY 2020-21. On the innovation and modernization front, the department successfully introduced its first joint audit and evaluation project, piloted MindBridge and select tools to analyze data and upgraded the case management tools allowing for better prioritization of administrative investigations and assignment of resources.

Civilian human resources management

Effective civilian human resources (HR) management remains critical to the successful implementation of SSE. In FY 2020-21, our attention focused on optimizing the civilian HR business model through the implementation of our campaign plan to grow our existing capabilities and redesign our HR services to better support the Defence Team.

Processes were streamlined. We continued to implement a series of flexible, innovative and outcome-driven business transformation initiatives to support client-centric solutions and to ensure that HR capabilities are consistent and strategic. We have seen improvements in the efficiency and effectiveness of our compensation, labour relations, staffing and classification functions through effective HR planning, prioritizing requests, and increasing our capacity.

These investments and process improvements facilitated continued HR support during the COVID-19 pandemic. Meaningful union occurred throughout the pandemic response to ensure that employees and managers were supported. Increased guidance was provided on flexible work arrangement and mental health resources; tracking of employee health and safety was expanded to inform decision-making within the department. Automation tools were implemented to improve HR processes and support the department with HR management.

Investments continued in digital HR capabilities, including the expansion and redesign of the [HR Go mobile app](#)^{clxxxi} to enhance user functionality. New information regarding civilian HR programs, services

and initiatives (e.g. mental health support, recruitment at DND, and information on workplace harassment and violence prevention) are added weekly and users can access new tools like gross pay calculators, casual end date calculators, reminders to submit leave and enter/approve pay, and a promotion estimator.

The HR Go mobile app, designed with input from our Defence Team members, puts civilian HR information and tools at users' fingertips and is the first of its kind in the federal government. The app had almost 9 000 downloads across all mobile platforms over FY 2020-21.

The HR Connect Resources Virtual Client Contact Center continued to be used as a service delivery channel for accessing HR programs and services. Available online and through a toll-free number, in FY 2020-21 it received and answered 18 477 employees and manager queries on various HR matters, including compensation, staffing, classification, and labour relations.

In light of the current COVID-19 pandemic context, DND adapted its talent sourcing strategies in favour of virtual career fairs and enhanced social media outreach to support broader outreach efforts to promote DND as an employer of choice. LinkedIn was used to advertise and target recruitment for hard-to-staff positions, and a [DND Virtual Career Fair](#)^{clxxxii} was held in January 2021 with over 6 000 attendees. These digital innovations have supported a user-centred approach to HR service delivery and have supported employees and managers during the COVID-19 pandemic.

The Defence Team increased its capacity to measure performance and provide civilian workforce business intelligence and analytics to senior decision makers. Dashboards on a variety of topics (e.g. compensation, staffing, Public Service Employee Survey results, and employment equity representation rates) are provided to the department's senior management on a consistent basis, allowing them to make informed, evidence-based decisions.

DND's civilian Labour Relations worked to establish a more proactive approach focused on outcomes over process to address both isolated and systemic issues. In addition, the Office of Disability Management was expanded to new regions. Analytics support was expanded for the department by tracking civilian workforce trends over the COVID-19 pandemic to monitor and support the Defence Team's health and safety, and to support data-enabled work and evidence-informed decision-making.

During FY 2020-21, significant improvements in compensation were achieved. DND compensation services has expanded its full-service approach by increasing one-on-one consultations with compensation advisors, expanding client care by contacting employees directly, and increasing in-person services on bases and wings. DND's backlog had been reduced from 36 023 active cases on 1 April 2020 to 22 221 active cases as of 31 March 2021 at the end of FY 2020-21 resulting in a reduction of 14 040 outstanding cases (39 percent) and a reduction of 4 182 employees impacted by Phoenix (22 percent). A sustained reduction of the backlog and business process improvements are the direct result of our investment in compensation services and our strong collaboration with the Public Services and Procurement Canada (PSPC).

Communicating with Canadians

DND and the CAF communicates with Canadians about efforts to protect Canada and Canadians, defend North America alongside the United States, and contribute to a more peaceful and stable world. As FY 2020-21 began with the onset of the COVID-19 pandemic, the Defence Team needed to inform Canadians about how it was contributing to the national response to the pandemic, and continuing essential military operations.

Key results included:

- The National Defence Media Relations Office managed 2 307 media requests, responding to 91 percent by negotiated deadlines;
- The Public Inquiries Desk responded to 1 313 requests for information from Canadians, 91 percent within 10 business days;
- 450 stakeholder engagement activities (mainly virtual events due to the pandemic) contributed to increasing audiences' understanding of Defence priorities, issues and challenges; and

- The 2020 National Veterans' Week Speakers Program demonstrated adaptation and innovation in the COVID-19 environment, as the program responded to 2 570 requests for videos featuring CAF speakers and CAF members volunteered to give 371 virtual presentations at schools and community organizations, reaching approximately 931 300 Canadians.

As Canadians increasingly use digital technologies to communicate in their daily lives, the Defence Team is taking a digital-first approach to communicating with Canadians. In FY 2020-21:

- Overall audience growth across all DND and CAF platforms including Facebook, Twitter, Instagram and YouTube increased by 36 percent;
- Web usability testing included four rounds of moderated, testing and three rounds of unmoderated remote testing with users, providing significant insights into which online tasks are currently successful and how to improve those that do not meet the benchmark for success; and
- Recruitment advertising campaigns were focused on promoting the unique full and part-time career opportunities offered by the CAF, along with addressing priority occupations. Campaigns including women in the forces, Indigenous peoples, and the Reserve Force used a mix of traditional and digital media to reach their audiences.

National Defence Headquarters – Carling Campus

Final occupant moves to NDHQ (Carling) were completed in July 2020. All information technology-related installation at NDHQ (Carling), including the completion of remaining conference/meeting rooms, were completed by end December 2020. All deficiency and change requests related to the Carling project are complete and the project was closed.

To achieve the objectives of the Government of Canada, DND and North American Aerospace Defense Command (NORAD) Command Women, Peace and Security. The Canadian NORAD Region established a gender advisor position within the headquarters and gender focal points at each of the detachments. To support the gender advisor, a number of personnel completed the United States Northern Command Operationalizing Women, Peace and Security (WPS) course.

Information management

In its efforts to align with the Government of Canada's information and data management priorities, which are included in the Treasury Board's [Policy on Service and Digital](#)^{clxxxiii}, the Chief Information Officer's organization has refreshed several internal policies and directives related to information management (IM) and is reviewing existing governance so it can be integrated and can foster digital transformation. An options space assessment to inform decision-making on the departmental go-forward Enterprise Document and Records Management System was conducted in FY 2020-21. COVID-19 propelled the emergency implementation of Defence 365, which is the DND version of Microsoft Office 365. This implementation guaranteed business continuity through a remote work posture requiring a revision of the options space assessment of existing platforms and an assessment of how IM maturity can be advanced.

In FY 2020-21, enterprise architecture for digital investments focused on establishing a network of domain experts to consult and advise on digital project files. DND has initiated further engagement with the Government of Canada Enterprise Architecture Review Board as a result of this increased effort.

Defence data, innovation and analytics

DND has aligned its priorities to enable data and analytics throughout the department and contribute to the implementation of the Defence Policy. The following were DND's priorities for FY 2020-21:

- Launched and implemented innovative recruitment initiatives and talent sourcing methods, including the use of LinkedIn Recruiter for targeted candidate sourcing;
- Expanded and added to the HR GO mobile app, which puts civilian HR information and tools at users' fingertips, to provide employees and managers with enhanced support;
- Launched a process to determine areas where the DND could leverage data to make factual data-driven decisions. Several key areas were identified where DND leadership will be able to make

evidence-based decisions on finance, supply chain management, human resources and operations;

- Issued the foundational guiding document *Analytics in DND/CAF—Vision and Guiding Principles*;
- Developed an annual internal engagement mechanism, which has provided a cross-cutting assessment of DND and the CAF's data maturity;
- Created a Data Literacy Strategy, led the development of numerous training development efforts and coordinated the delivery of various online training initiatives. A virtual community of practice has been established to engage and support data and analytics practitioners of all levels across the organization; and
- While the department does not offer a significant number of external services to Canadians, it continued to mature its tracking and reporting of external services with a view to evolving the client-centric service design elements of the Treasury Board Secretariat's *Policy on Service and Digital*. The department continues to meet all service standards in this regard.

Information technology

DND continued to modernize its enterprise resource management systems to support the department's transition to evidence-based decision-making. This included work to modernize the Defence Resource Management Information System.

DND's enterprise resource management tools are used to capture its business information related to finance, human resources materiel management to inform decision-making and reporting.

DND provided advanced enterprise business intelligence and analytics to the Materiel Group and CAF Health Services Group to assist in developing and establishing their supply chain business analytics, and developing the COVID-19 dashboard, which assisted the CAF Health Service Group in establishing a capability to monitor CAF health status and vaccination with respect to COVID-19.

Experimentation

The department has been leveraging investments in technology to achieve an HR digital transformation to create a service-oriented and user-centred approach to HR service delivery. These digital innovations and analytic enhancements also helped the department support employees and managers during the COVID-19 pandemic response.

The civilian HR team implemented the following digital transformations to support the Defence Team:

- Implemented and expanded the use of robotic process automation to automate and streamline a variety of HR business processes in order to enhance the delivery of the HR experience and reduce administrative burdens; and
- Launched a [DND Careers Tool](#)^{clxxxiv} on the HR Go mobile app to support student hiring and match students to potential jobs within DND.

Additional Defence-related experimentation activities are outlined in this report under [Core Responsibility 4 – Future Force Design](#).

Key corporate risk(s)

IT Management – There is a risk that DND and the CAF may have difficulty maintaining its information technology capabilities at the right level to support operations.

The above risk can affect the department's ability to achieve the departmental results of the Internal Services core responsibility.

As the Defence Departmental Results Framework reflects a chain of delivery from conceiving of the required armed forces, to developing them and then executing operations, the activities to mitigate the risks of the Internal Services core responsibility can also be found in other core responsibilities which deliver building blocks that enable Internal Services results.

Many of the preventative and mitigating controls for this risk are articulated as activities of each departmental result below.

Budgetary financial resources (dollars)

2020-21 Main Estimates	2020-21 Planned spending	2020-21 Total authorities available for use	2020-21 Actual spending (authorities used)	2020-21 Difference (Actual spending minus Planned spending)
695,921,525	699,552,288	1,137,790,770	879,539,855	179,987,567

Human resources (full-time equivalents)

2020-21 Planned full-time equivalents	2020-21 Actual full-time equivalents	2020-21 Difference (Actual full-time equivalents minus Planned full-time equivalents)
5,293	4,342	(951)

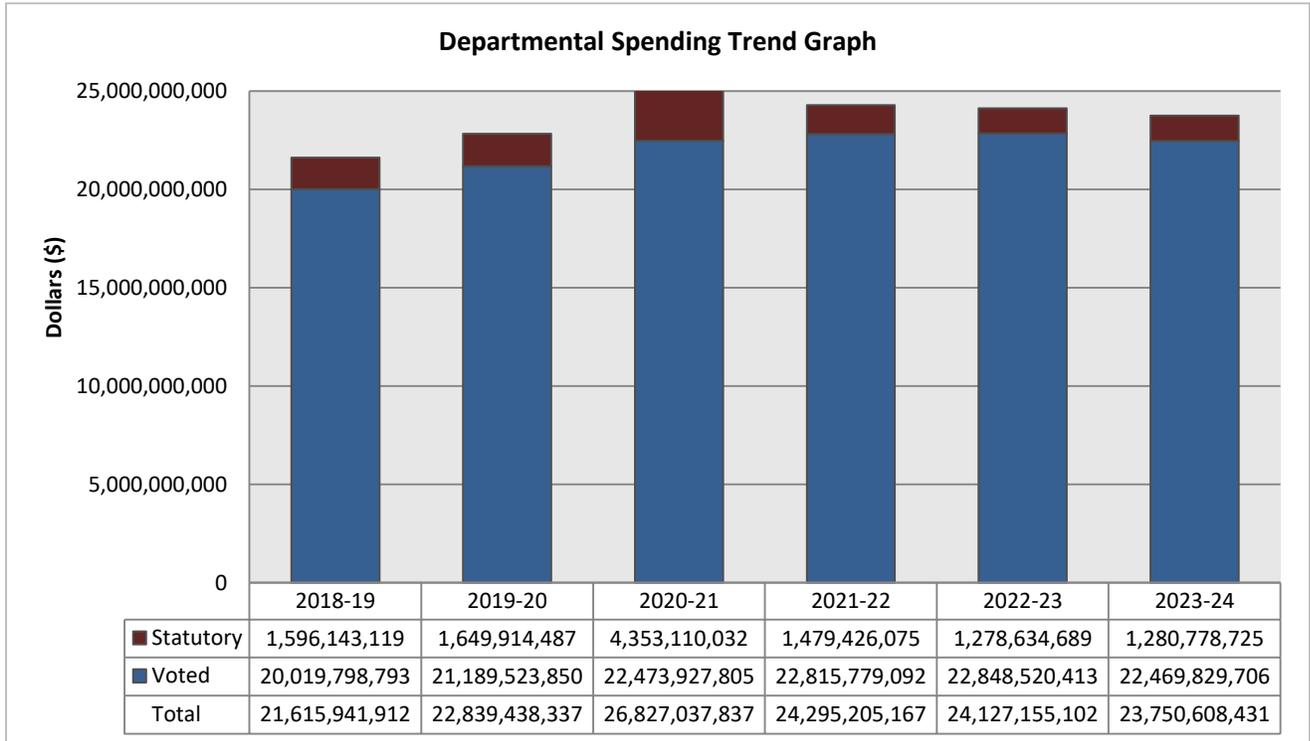
Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{cb00v}.

Analysis of trends in spending and human resources

Actual expenditures

Departmental spending trend graph

The following graph presents planned (voted and statutory) spending over time.



Budgetary performance summary for Core Responsibilities and Internal Services (dollars)

Core Responsibilities and Internal Services	2020-21 Main Estimates	2020-21 Planned spending	2021-22 Planned spending	2022-23 Planned spending	2020-21 Total authorities available for use	2018-19 Actual spending (authorities used)	2019-20 Actual spending (authorities used)	2020-21 Actual spending (authorities used)
Operations	1,075,628,685	1,080,817,402	684,095,922	688,988,747	1,342,474,789	1,424,919,741	1,044,514,772	1,028,857,684
Ready Forces	9,716,036,927	9,760,714,328	9,972,852,765	10,096,532,908	11,722,566,619	9,506,982,585	9,875,229,209	11,719,160,120
Defence Team	9,416,850,794	3,444,253,339	3,554,626,936	3,591,485,901	4,102,372,061	2,779,583,406	3,365,827,143	4,057,640,230
Future Force Design	840,491,721	845,220,905	768,019,319	779,337,759	881,591,666	845,573,026	758,767,329	836,173,606
Procurement of Capabilities	3,907,432,104	3,910,791,611	4,741,325,826	4,310,164,815	4,701,330,194	3,069,157,738	3,298,055,560	4,119,915,713
Sustainable Bases, Information Technology Systems and Infrastructure	3,665,573,962	3,680,697,534	3,829,653,614	3,899,491,700	4,165,436,326	3,219,172,782	3,651,639,001	4,185,750,629
Subtotal	22,622,014,193	22,722,495,119	23,550,574,382	23,366,001,830	26,915,771,655	20,845,389,278	21,994,033,014	25,947,497,982
Internal Services	695,921,525	699,552,288	744,630,785	761,153,272	1,137,790,770	770,552,634	845,405,323	879,539,855
Total	23,317,935,718	23,422,047,407	24,295,205,167	24,127,155,102	28,053,562,425	21,615,941,912	22,839,438,337	26,827,037,837

Source: Vice-Chief of the Defence Staff Group / Assistant Deputy Minister (Finance) / Chief Financial Officer Group

Notes:

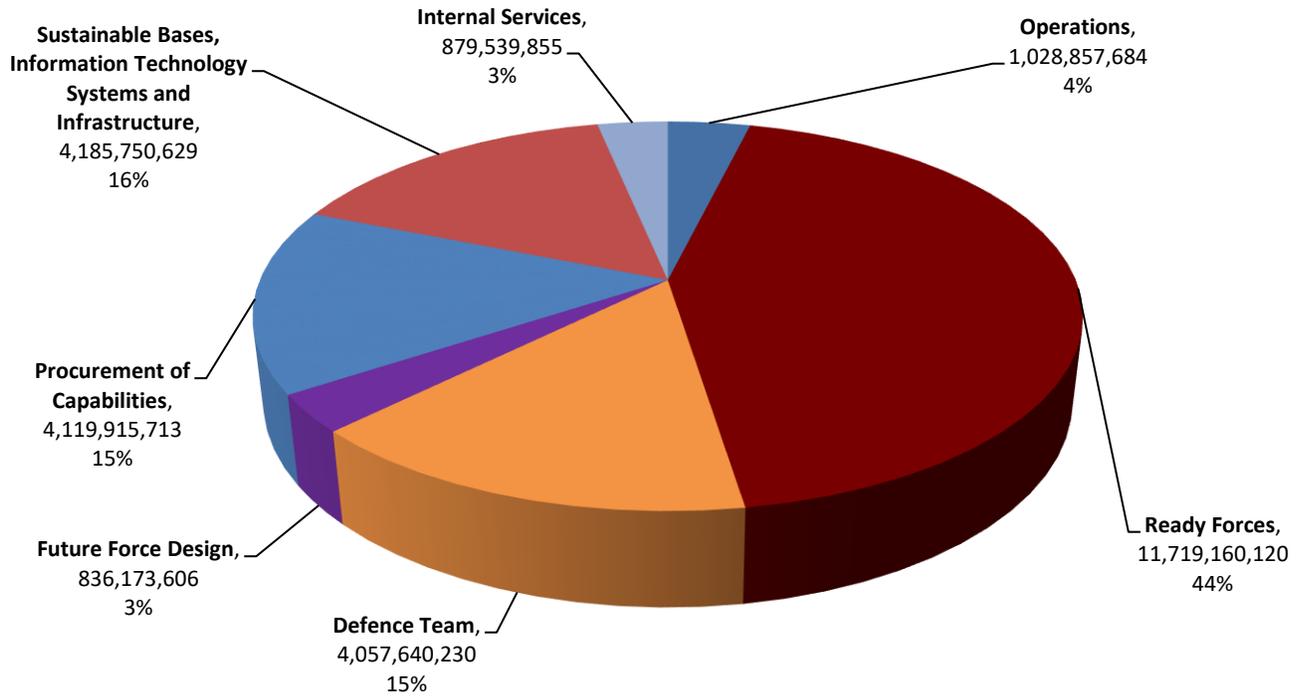
1. Due to rounding, figures may not add up to totals shown.
2. Where the actual spending amount is higher than the total authorities, this does not represent an over-expenditure of Parliamentary authorities. Parliamentary authorities are allocated by vote and not by core responsibility and program.
3. Significant variances in financial resources are detailed at the core responsibility and program level in the "Supporting information on the program inventory" section of the document. Explanations are provided when the variance is at least 100M or when the difference between the actual and the planned amount is 100%.

Budgetary actual gross spending summary (dollars)

Core Responsibilities and Internal Services	2020–21 Actual gross spending	2020–21 Actual revenues netted against expenditures	2020–21 Actual net spending (authorities used)
Operations	1,028,948,799	91,115	1,028,857,684
Ready Forces	11,871,664,331	152,504,211	11,719,160,120
Defence Team	4,107,266,816	49,626,586	4,057,640,230
Future Force Design	836,474,895	301,289	836,173,606
Procurement of Capabilities	4,119,983,111	67,398	4,119,915,713
Sustainable Bases, Information Technology Systems and Infrastructure	4,337,795,219	152,044,590	4,185,750,629
Subtotal	26,302,133,171	354,635,189	25,947,497,982
Internal Services	892,123,932	12,584,077	879,539,855
Total	27,194,257,103	367,219,266	26,827,037,837

Notes: Due to rounding, figures may not add up to totals shown.

Departmental Spending for 2020-21 by Core Responsibility (dollars)



Actual human resources

The COVID-19 pandemic impacted the CAF's ability to recruit and train personnel. As a result, the total CAF Regular Force strength declined from 67 500 personnel to 65 554 personnel in FY 2020-21.

The department's civilian population increased to 25 629 full-time equivalents (FTEs), up from 25 499 from FY 2019-20. This increased capacity helps ensure that we have the right people, in the right place, at the right time while respecting human resources and budget allocations. The department is in a state of growth and is focused on aligning civilian resources to fulfill renewed departmental priorities and supporting SSE.

The following table shows actual, forecast and planned full-time equivalents (FTEs) for each Core Responsibility in the Department of National Defence and the Canadian Armed Forces' departmental results framework and to Internal Services for the years relevant to the current planning year.

Human resources summary for Core Responsibilities and Internal Services

Core Responsibilities and Internal Services	2018-19 Actual full-time equivalents	2019-20 Actual full-time equivalents	2020-21 Planned full-time equivalents	2020-21 Actual full-time equivalents	2021-22 Planned full-time equivalents	2022-23 Planned full-time equivalents
Operations	4,884	2,647	2,860	2,156	3,078	3,113
Ready Forces	45,566	45,797	46,489	45,431	46,716	47,177
Defence Team	20,123	20,407	20,838	18,902	18,059	18,223
Future Force Design	2,421	1,930	2,223	1,883	2,086	2,072
Procurement of Capabilities	2,420	2,427	2,176	2,525	2,843	2,832
Sustainable Bases, Information Technology Systems and Infrastructure	13,209	15,974	14,843	15,944	16,493	16,519
Subtotal	88,623	89,182	89,429	86,841	89,275	89,936
Internal Services	3,347	4,070	5,293	4,342	4,470	4,456
Total	91,970	93,252	94,722	91,183	93,745	94,392

Total planned human resources – Reserve Force personnel

The Reserve Force is a valued and integrated component of the CAF. It is divided into four distinct sub-components:

- Primary Reserve Force;
- Cadet Organization Administration and Training Service;
- Canadian Rangers; and
- Supplementary Reserve (strategic reserve).

The Primary Reserve consists predominately of part-time professional CAF members, located throughout Canada, ready with reasonable notice to conduct or contribute to domestic and international operations to safeguard the defence and security of Canada. As articulated in *Strong, Secure, Engaged: Canada's Defence Policy*, there are 10 independent initiatives and two activities that centre on the Reserve Force. In FY 2020-21, the Central Coordination Authority was established within the Vice Chief of the Defence Staff Group in order to review the existing fiscal framework of these initiatives and activities and to manage access to funding through a single conduit. The Central Coordination Authority will coordinate efforts across the CAF to meet the overall Defence Policy objective of maximizing the operational output of the Reserve Force (full-time capability through part-time service) through the conception, development, funding, sustainment and integration of unique enablers and/or combat multipliers (new or existing).

The Cadet Organization Administration and Training Service completed an organizational restructure and will be maintained at the current approved target of 8 000 personnel.

The Canadian Rangers are an integral CAF northern presence and regularly provide support to local, provincial or territorial authorities for ground search and rescue. They are Canada's eyes, ears and guides across the country, particularly the sparsely settled northern, coastal and isolated areas of Canada. The Canadian Rangers, as a sub-component of the Reserve Force are separate from the Primary Reserve Force and are unique not only in the skills and expertise they bring to the CAF, but also in the locations in which they operate.

The COVID-19 pandemic resulted in more requests for support from Canadian Rangers compared to previous years. In FY 2020-21, Canadian Rangers contributions included:

- More than 1 100 days of Canadian Rangers supporting their communities as part of either Operations VECTOR or LENTUS;
- More than 60 ground search and rescue; and
- Nineteen patrols to inspect Northern warning system sites.

Canadian Rangers patrol growth was paused in FY 2020-21 in order to limit the risk of transmitting COVID-19 to isolated communities. This growth will resume when restrictions ease.

During FY 2020-21, Canadian Ranger development and enhancement were areas of focus as part of an overall ongoing review of the Canadian Ranger program. This review will seek to optimize the Rangers' role while modernizing institutional support to operations. In January 2021, the Commander of the CA issued his planning guidance to start the implementation of the Canadian Ranger Enhancement initiative in the second quarter of FY 2021-22.

The following table provides our total planned human resources for Reserve Force personnel for the next three FYs (2020-23).

	Planned 2020–21	Actual 2020–21	Difference (actual minus planned)
Primary Reserve	28,950	23,935	5,015
Cadet Organization Administration and Training Service	8,000	6,965	1,035
Canadian Rangers	5,640	5,249	391

Average paid strength (APS) is used to report the strength of the Primary Reserve in the Departmental Results Report as per the guidance and methodology for counting the Primary Reserve, dated 6 March 2017. The guidance and methodology indicate that APS will continue to be used to report to Government, while other metrics are used internally to report to CAF. To enhance accuracy in reporting Primary Reserve strength and capabilities, a harmonized methodology is deemed necessary. To do so, a one-CAF establishment model will set the appropriate framework required to increase efficiency and effectiveness in measuring the Primary Reserve output (trained effective strength) in support of Canada's Defence Policy (SSE).

Expenditure by vote

For information on the Department of National Defence and the Canadian Armed Forces' organizational voted and statutory expenditures, consult the [Public Accounts of Canada 2020-21](#)^{clxxxvi}.

Government of Canada spending and activities

Information on the alignment of the Department of National Defence and the Canadian Armed Forces' spending with the Government of Canada's spending and activities is available in the [GC InfoBase](#)^{clxxxvii}.

Financial statements and financial statements highlights

Financial statements

The Department of National Defence and the Canadian Armed Forces' financial statements (unaudited) for the year ended 31 March 2021 are available on the [departmental website](#)^{clxxxviii}.

Financial statements highlights

Condensed Statement of Operations (unaudited) for the year ended 31 March 2021 (dollars)

Financial information	2020-21 Planned results	2020-21 Actual results	2019-20 Actual results	Difference (2020-21 Actual results minus 2020-21 Planned results)	Difference (2020-21 Actual results minus 2019-20 Actual results)
Total expenses	22,945,471	26,733,836	22,840,168	3,788,365	3,893,668
Total revenues	424,908	387,243	428,141	(37,665)	(40,898)
Net cost of operations before government funding and transfers	22,520,563	26,346,593	22,412,027	3,826,030	3,934,566

Condensed Statement of Financial Position (unaudited) as of 31 March 2021 (dollars)

Financial information	2020-21	2019-20	Difference (2020-21 minus 2019-20)
Total net liabilities	7,208,305	6,219,658	988,647
Total net financial assets	3,664,528	3,263,733	400,795
Departmental net debt	3,543,777	2,955,925	587,852
Total non-financial assets	43,342,374	41,504,280	1,838,094
Departmental net financial position	39,798,597	38,548,355	1,250,242

Corporate information

Organizational profile

Appropriate minister:	The Honourable Anita Anand, PC, MP (appointed October 2021) The Honourable Harjit S. Sajjan, PC, OMM, MSM, CD, MP (from November 2015 to October 2021)
Associate minister:	The Honourable Lawrence MacAulay, PC, MP
Institutional head:	Jody Thomas, Deputy Minister
Chief of the Defence Staff:	General Wayne D. Eyre, CMM, MSC, CD (acting since February 2021) Admiral Art McDonald, CMM, MSM, CD (from January 2021 to February 2021) General Jonathan Vance, CMM, MSC, CD (from July 2015 to January 2021)

Ministerial portfolio:

- Department of National Defence
- Canadian Armed Forces
- [National Defence and Canadian Forces Ombudsman](#)^{clxxxix}
- [Independent Review Panel for Defence Acquisition](#)^{cxc}
- [Office of the Chief Military Judge](#)^{cxc}
- [Defence Research and Development Canada](#)^{cxcii}
- [Communications Security Establishment](#)^{cxciii}
- [Military Police Complaints Commission of Canada](#)^{cxciv}
- [Military Grievances External Review Committee](#)^{cxcv}

Enabling instruments:

- [National Defence Act](#)^{cxcvi}
- [Communications Security Establishment Act](#)^{cxcvii}
- [Emergencies Act](#)^{cxcviii}
- [Aeronautics Act](#)^{cxcix}
- [Fisheries Act](#)^{cc}

For further information, see [Legislation and National Defence](#)^{cci}.

Year of incorporation / commencement: 1923

For additional corporate information visit the [Department of National Defence and the Canadian Armed Forces' website](#)^{ccii}.

Raison d'être, mandate and role: who we are and what we do

"Raison d'être, mandate and role: who we are and what we do" is available on the [Department of National Defence and the Canadian Armed Forces' website](#)^{cciii}.

For more information on the department's organizational mandate letter commitments, see the [Minister's mandate letter](#)^{cciv}.

Operating context

Information on the operating context is available on the [Department of National Defence and Canadian Armed Forces' website](#)^{ccv}.

Reporting framework

The Department of National Defence and the Canadian Armed Forces' Departmental Results Framework and Program Inventory of record for 2020-21 are shown below.

Core Responsibility	Operations				
Description	<p>Detect, deter and defend against threats to or attacks on Canada. Assist civil authorities and law enforcement, including counter-terrorism, in support of national security, domestic disasters or major emergencies, and conduct search and rescue operations.</p> <p>Detect, deter and defend against threats to or attacks on North America in partnership with the United States, including through NORAD.</p> <p>Lead and/or contribute forces to NATO and coalition efforts to deter and defeat adversaries, including terrorists, to support global stability. Lead and/or contribute to international peace operations and stabilization missions with the United Nations, NATO and other multilateral partners. Engage in capacity building to support the security of other nations and their ability to contribute to security and the security of Canadians abroad. Assist civil authorities and non-governmental partners in responding to international and domestic disasters or major emergencies.</p>				
Results and Indicators	<p>Canadians are protected against threats to and attacks on Canada</p> <ul style="list-style-type: none"> • % of requests for assistance that are fulfilled • % of force elements that are deployed within established timelines • % of operations that meet stated objectives • Extent to which the Canadian Armed Forces is effective in domestic operations 	<p>People in distress receive effective search and rescue response</p> <ul style="list-style-type: none"> • % of coordinated maritime, aeronautical and joint response to search and rescue incidents deemed effective • % of requests for Canadian Armed Forces aeronautical search and rescue assistance that are fulfilled • % of Canadian Armed Forces aeronautical search and rescue operations that meet established standards 	<p>Canada's Arctic sovereignty is preserved and safeguarded</p> <ul style="list-style-type: none"> • % of Arctic operations and exercises that meet stated objectives 	<p>North America is defended against threats and attacks</p> <ul style="list-style-type: none"> • % of continental operations that meet stated objectives • % of Canada's commitments and obligations to the North American Aerospace Defense Command agreement that are met • Extent to which the Canadian Armed Forces is effective in continental operations 	<p>Canadian Armed Forces contribute to a more stable and peaceful world</p> <ul style="list-style-type: none"> • % of international operations that meet stated objectives • Extent to which the Canadian Armed Forces is effective in international operations
Program Inventory	<ul style="list-style-type: none"> • Operations in Canada • Operations in North America • International Operations • Global Engagement • Cyber Operations • Command, Control and Sustainment of Operations • Special Operations 				

Core Responsibility	Ready Forces	
Description	Field combat ready forces able to succeed in an unpredictable and complex security environment in the conduct of concurrent operations associated with all mandated missions.	
Results and Indicators	Canadian Armed Forces are ready to conduct concurrent operations <ul style="list-style-type: none"> • % of operations that are capable of being conducted concurrently • % of force elements that are ready for operations in accordance with established targets 	Military equipment is ready for training and operations <ul style="list-style-type: none"> • % of maritime key fleets that are serviceable to meet training and readiness requirements • % of land fleets that are serviceable to meet training and readiness requirements • % of aerospace fleets that are serviceable to meet training and readiness requirements
Program Inventory	<ul style="list-style-type: none"> • Strategic Command and Control • Ready Naval Forces • Ready Land Forces • Ready Air and Space Forces • Ready Special Operations Forces • Ready Cyber and Joint Communication Information Systems (CIS) Forces • Ready Intelligence Forces • Ready Joint and Combined Forces • Ready Health, Military Police and Support Forces • Equipment Support • Canadian Forces Liaison Council and Employer Support 	

Core Responsibility	Defence Team				
Description	Recruit, develop and support an agile and diverse Defence team, within a healthy workplace free from harmful behaviour; support military families; and meet the needs of all retiring military personnel, including the ill and injured. Strengthen Canadian communities by investing in youth.				
Results and Indicators	<p>Canadian Armed Forces is growing towards its end state of 101,500 personnel</p> <ul style="list-style-type: none"> • % of Regular force positions that are filled • % of Reserve force positions that are filled • % of occupations with critical shortfalls 	<p>The health and well-being of the Defence team is well supported</p> <ul style="list-style-type: none"> • % of military personnel who are medically fit for their occupation • % of military personnel who feel that the Canadian Armed Forces provides a reasonable quality of life for themselves and their families • % of Canadian Armed Forces members who report a high level of workplace well-being • % of civilian employees who describe the workplace as psychologically healthy 	<p>The Defence team reflects the values and diversity of Canadian society</p> <ul style="list-style-type: none"> • % of the Canadian Armed Forces (CAF) who self-identify as a woman • % of civilians in the Defence team who self-identify as a woman • % of the Canadian Armed Forces (CAF) who self-identify as a visible minority • % of civilians in the Defence team who self-identify as a visible minority • % of the Canadian Armed Forces (CAF) who self-identify as an indigenous person • % of civilians who self-identify as an indigenous person • % of the Canadian Armed Forces (CAF) who self-identify as victims of harassment • % of civilians who self-identify as victims of harassment • % of the Canadian Armed Forces (CAF) who self-identify as victims of discrimination • % of civilians who self-identify as victims of discrimination • Annual number of reported incidents of sexual misconduct in the Defence team • Number and type of actions taken in response to reported sexual misconduct incidents by the Defence Team • Number of Defence team members who have attended a training session related to sexual misconduct (Operation HONOUR) • % of civilians in the Defence team who have completed mandatory harassment training 	<p>Military families are supported and resilient</p> <ul style="list-style-type: none"> • % of Canadian Armed Forces families who feel they meet the challenges of military life • % of Canadian Armed Forces members who are satisfied with the overall support their family receives from the Canadian Armed Forces 	<p>Youth in Canada are provided with experience and opportunities that enable a successful transition to adulthood</p> <ul style="list-style-type: none"> • % of the target Canadian youth population that participates in Cadets and Junior Canadian Rangers

Program Inventory	<ul style="list-style-type: none"> • Recruitment • Individual Training and Professional Military Education • Total Health Care • Defence Team Management • Military Transition • Military Member and Family Support • Military History and Heritage • Military Law Services/Military Justice Superintendence • Ombudsman • Cadets and Junior Canadian Rangers (Youth Program)
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Core Responsibility	Future Force Design		
Description	Develop and design the future force through a deep understanding of the future operating environment and security risks to Canada and Canadian interests. Enhance Defence's ability to identify, prevent, adapt and respond to a wide range of contingencies through collaborative innovation networks and advanced research.		
Results and Indicators	<p>Defence capabilities are designed to meet future threats</p> <ul style="list-style-type: none"> • Extent to which the Future Security Environment assessment remains valid • Degree to which future security assessments and capability deductions remain coherent with those of our allies and partners • Degree to which future capabilities required to ensure an operational advantage over defence and security threats have been accounted for in defence plans 	<p>Defence and security challenges are addressed through innovative solutions</p> <ul style="list-style-type: none"> • % of initiatives and projects that are supported by Defence Science and Technology • % of Innovation for Defence Excellence and Security (IDEaS) projects that resulted in useful advice, adoption, integration or eventual procurement of a new defence and security capability 	
Program Inventory	<ul style="list-style-type: none"> • Joint Force Development • Naval Force Development • Land Force Development • Air and Space Force Development • Special Operations Force Development • Cyber and Joint Communication Information Systems (CIS) Force Development • Intelligence Force Development • Science, Technology and Innovation 		

Core Responsibility	Procurement of Capabilities			
Description	Procure advanced capabilities to maintain an advantage over potential adversaries and to keep pace with allies, while fully leveraging defence innovation and technology. Streamlined and flexible procurement arrangements ensure Defence is equipped to conduct missions.			
Results and Indicators	<p>Defence procurement is streamlined</p> <ul style="list-style-type: none"> • % of projects that meet the approved project development and approval timelines (low risk and low complexity projects) • % of goods and services contracts that are awarded within established performance targets 	<p>Defence equipment acquisition is well-managed</p> <ul style="list-style-type: none"> • % of capital equipment projects that remain in approved scope • % of capital equipment projects that remain on approved schedule • % of capital equipment projects that remain within approved expenditure authority 	<p>Defence information technology acquisition is well-managed</p> <ul style="list-style-type: none"> • % of information technology projects that remain in approved scope • % of information technology projects that remain on approved schedule • % of information technology projects that remain within approved expenditure authority 	<p>Supplies are available and well-managed</p> <ul style="list-style-type: none"> • % of stock that is unavailable to meet forecasted demand • % of stock disposed that was identified as surplus
Program Inventory	<ul style="list-style-type: none"> • Maritime Equipment Acquisition • Land Equipment Acquisition • Aerospace Equipment Acquisition • Defence Information Technology Systems Acquisition, Design and Delivery • Defence Materiel Management 			

Core Responsibility	Sustainable Bases, Information Technology Systems and Infrastructure		
Description	Develop and manage modern, operational and sustainable bases and infrastructure. Contribute to the achievement of federal environmental targets.		
Results and Indicators	Naval, Army and Air Force Bases enable military operations and defence activities <ul style="list-style-type: none"> • % of single quarters accommodations that can be used • % deviation of average daily meal cost from the standard allowance 	Defence infrastructure is well-managed throughout its lifecycle <ul style="list-style-type: none"> • % of infrastructure in suitable condition • % of maintenance and repair investment in relation to the infrastructure portfolio value • % of the total real property value that is identified as surplus 	Defence activities are carried out in a safe and environmentally responsible manner <ul style="list-style-type: none"> • % of Defence Energy and Environment Strategy commitments that are met or exceeded • % of greenhouse gas emissions reduction relative to a 2005 baseline • % of light-duty vehicle fleet that is hybrid, plug-in hybrid and/or electric • % of reduction in contaminated sites liability based on the closing liability of the previous year
Program Inventory	<ul style="list-style-type: none"> • Defence Infrastructure Program Management • Defence Infrastructure Construction, Recapitalization and Investment • Defence Infrastructure Maintenance, Support and Operations • Military Family Housing • Defence Information Technology Services and Programme Management • Environmental Sustainability and Protection • Indigenous Affairs • Naval Bases • Land Bases • Air and Space Wings • Joint, Common and International Bases • Military Police Institutional Operations • Safety 		

Supporting information on the program inventory

Financial, human resources and performance information for the Department of National Defence and the Canadian Armed Forces' Program Inventory is available in the [GC InfoBase](#)^{ccvi}.

Supplementary information tables

The following supplementary information tables are available on [the Department of National Defence and the Canadian Armed Forces' website](#)^{ccvii}:

- [Details on transfer payment programs](#)^{ccviii}
- [Gender-based analysis plus](#)^{ccix}
- [Response to parliamentary committees and external audits](#)^{ccx}
- [Status report on transformational and major Crown projects](#)^{ccxi}

Federal tax expenditures

The tax system can be used to achieve public policy objectives through the application of special measures such as low tax rates, exemptions, deductions, deferrals and credits. The Department of Finance Canada publishes cost estimates and projections for these measures each year in the [Report on Federal Tax Expenditures](#)^{ccxii}. This report also provides detailed background information on tax expenditures, including descriptions, objectives, historical information and references to related federal spending programs as well as evaluations and GBA Plus of tax expenditures.

Organizational contact information

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Appendix: definitions

appropriation (*crédit*)

Any authority of Parliament to pay money out of the Consolidated Revenue Fund.

budgetary expenditures (*dépenses budgétaires*)

Operating and capital expenditures; transfer payments to other levels of government, organizations or individuals; and payments to Crown corporations.

capability (capacité)

The ability to carry out a military operation to create an effect.

Core Responsibility (responsabilité essentielle)

An enduring function or role performed by a department. The intentions of the department with respect to a core responsibility are reflected in one or more related departmental results that the department seeks to contribute to or influence.

Departmental Plan (*plan ministériel*)

A report on the plans and expected performance of an appropriated department over a 3-year period. Departmental Plans are usually tabled in Parliament each spring.

departmental priority (*priorité*)

A plan or project that a department has chosen to focus and report on during the planning period. Priorities represent the things that are most important or what must be done first to support the achievement of the desired departmental results.

departmental result (*résultat ministériel*)

A consequence or outcome that a department seeks to achieve. A departmental result is often outside departments' immediate control, but it should be influenced by program-level outcomes.

departmental result indicator (*indicateur de résultat ministériel*)

A quantitative measure of progress on a departmental result.

departmental results framework (*cadre ministériel des résultats*)

A framework that connects the department's core responsibilities to its departmental results and departmental result indicators.

Departmental Results Report (*rapport sur les résultats ministériels*)

A report on a department's actual accomplishments against the plans, priorities and expected results set out in the corresponding Departmental Plan.

experimentation (*expérimentation*)

The conducting of activities that seek to first explore, then test and compare the effects and impacts of policies and interventions in order to inform evidence-based decision-making, and improve outcomes for Canadians, by learning what works, for whom and in what circumstances. Experimentation is related to, but distinct from innovation (the trying of new things), because it involves a rigorous comparison of results. For example, using a new website to communicate with Canadians can be an innovation; systematically testing the new website against existing outreach tools or an old website to see which one leads to more engagement, is experimentation.

full-time equivalent (*équivalent temps plein*)

A measure of the extent to which an employee represents a full person-year charge against a departmental budget. For a particular position, the full-time equivalent figure is the ratio of number of

hours the person actually works divided by the standard number of hours set out in the person's collective agreement.

gender-based analysis plus (GBA Plus) (*analyse comparative entre les sexes plus [ACS Plus]*)

An analytical process used to assess how diverse groups of women, men and gender-diverse people experience policies, programs and services based on multiple factors including race ethnicity, religion, age, and mental or physical disability.

government-wide priorities (*priorités pangouvernementales*)

For the purpose of the 2020–21 Departmental Results Report, those high-level themes outlining the government's agenda in the 2019 Speech from the Throne, namely: Fighting climate change; Strengthening the Middle Class; Walking the road of reconciliation; Keeping Canadians safe and healthy; and Positioning Canada for success in an uncertain world.

horizontal initiative (*initiative horizontale*)

An initiative where two or more federal organizations are given funding to pursue a shared outcome, often linked to a government priority.

non-budgetary expenditures (*dépenses non budgétaires*)

Net outlays and receipts related to loans, investments and advances, which change the composition of the financial assets of the Government of Canada.

performance (*rendement*)

What an organization did with its resources to achieve its results, how well those results compare to what the organization intended to achieve, and how well lessons learned have been identified.

performance indicator (*indicateur de rendement*)

A qualitative or quantitative means of measuring an output or outcome, with the intention of gauging the performance of an organization, program, policy or initiative respecting expected results.

performance reporting (*production de rapports sur le rendement*)

The process of communicating evidence-based performance information. Performance reporting supports decision-making, accountability and transparency.

plan (*plan*)

The articulation of strategic choices, which provides information on how an organization intends to achieve its priorities and associated results. Generally, a plan will explain the logic behind the strategies chosen and tend to focus on actions that lead to the expected result.

planned spending (*dépenses prévues*)

For Departmental Plans and Departmental Results Reports, planned spending refers to those amounts presented in Main Estimates.

A department is expected to be aware of the authorities that it has sought and received. The determination of planned spending is a departmental responsibility, and departments must be able to defend the expenditure and accrual numbers presented in their Departmental Plans and Departmental Results Reports.

program (*programme*)

Individual or groups of services, activities or combinations thereof that are managed together within the department and focus on a specific set of outputs, outcomes or service levels.

program inventory (*répertoire des programmes*)

Identifies all the department's programs and describes how resources are organized to contribute to the department's core responsibilities and results.

result (*résultat*)

A consequence attributed, in part, to an organization, policy, program or initiative. Results are not within the control of a single organization, policy, program or initiative; instead they are within the area of the organization's influence.

statutory expenditures (*dépenses législatives*)

Expenditures that Parliament has approved through legislation other than appropriation acts. The legislation sets out the purpose of the expenditures and the terms and conditions under which they may be made.

target (*cible*)

A measurable performance or success level that an organization, program or initiative plans to achieve within a specified time period. Targets can be either quantitative or qualitative.

voted expenditures (*dépenses votées*)

Expenditures that Parliament approves annually through an appropriation act. The vote wording becomes the governing conditions under which these expenditures may be made.

Endnotes

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