

MILITARY UNDERFUNDED: THE WALK MUST MATCH THE TALK

Report of the Standing Senate Committee on National Security and Defence

The Honourable Daniel Lang, Chair

The Honourable Mobina S.B. Jaffer, Deputy Chair

April 2017



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MEMBERS OF THE STANDING SENATE COMMITTEE ON NATIONAL SECURITY AND DEFENCE

The Honourable Daniel Lang, Chair
The Honourable Mobina S.B. Jaffer, Deputy Chair

And

The Honourable Senators:

Lynn Beyak
Gwen Boniface *
Claude Carignan, P.C.
Jean-Guy Dagenais
Colin Kenny
Frances Lankin, P.C. *
Marilou McPhedran *
Lucie Moncion *
Raymonde Saint-Germain *
Vernon White

Ex-officio members of the Committee:

The Honourable Senators Larry Smith (or Yonah Martin) and Peter Harder, P.C.(or Diane Bellemare).

Other Senators who participated from time to time in the work of the Committee:

The Honourable Senators Larry W. Campbell, James S. Cowan, Joseph A. Day, Elaine McCoy, Don Meredith, Wilfred P. Moore, Victor Oh, Dennis Glen Patterson, André Pratte, Nancy Greene Raine and Pierrette Ringuette.

Senators' Staff

Naresh Raghubeer, Director of Policy and Parliamentary Affairs, Office of Senator Daniel Lang
Alexander Mendes, Legislative Assistant, Office of Senator Mobina Jaffer
Roy Rempel, Policy Advisor, Office of Senator Smith

Clerk of the Committee:

Adam Thompson, Clerk
Barbara Reynolds

* These senators joined the committee in December 2016 or later, after the committee had completed hearing evidence in relation to this study. As such, they may or may not endorse the conclusions reached by the committee.

ORDER OF REFERENCE

Extract from the *Journals of the Senate*, Thursday, April 21, 2016:

With leave of the Senate,

The Honourable Senator Lang moved, seconded by the Honourable Senator Tannas:

That the Standing Senate Committee on National Security and Defence be authorized to examine and report on issues related to the Defence Policy Review presently being undertaken by the government;

That, pursuant to rule 12-18(2)(b)(i), the committee be authorized to meet from June to September 2016, even though the Senate may then be adjourned for a period exceeding one week;

That the committee be permitted, notwithstanding usual practices, to deposit with the Clerk of the Senate its report if the Senate is not then sitting, and that the report be deemed to have been tabled in the Chamber; and

That the committee table its report no later than December 16, 2016, and that the committee retain all powers necessary to publicize its findings for 180 days after the tabling of the final report.

After debate,

The question being put on the motion, it was adopted.

Charles Robert

Clerk of the Senate

Extract from the *Journals of the Senate*, Monday, December 12, 2016:

The Honourable Senator Lang moved, seconded by the Honourable Senator Smith:

That, notwithstanding the order of the Senate adopted on Thursday, April 21, 2016, the date for the final report of the Standing Senate Committee on National Security and Defence in relation to its study of issues related to the Defence Policy Review presently being undertaken by the government be extended from December 16, 2016 to June 30, 2017.

The question being put on the motion, it was adopted.

Charles Robert

Clerk of the Senate

EXECUTIVE SUMMARY

This report focuses on broader issues related to the Canadian military and the defence policy review.

Specifically, it addresses:

- the continual underfunding of Canada's own security needs, and through that the military;
- the problems of an overly-complex procurement system that lapses billions of dollars annually and under delivers equipment to the military;
- risks to Canada's critical infrastructure;
- the need for cross-party consensus on military issues; and
- the need for quadrennial defence policy reviews and reviews of national security strategy and foreign policy.

In part two of the committee's report, which will be tabled next month, we will examine specific capability gaps in the Canadian Armed Forces and steps to ensure Canada's military receives the support it requires to defend Canada and meet our NATO and NORAD commitments.

PROVIDING ADEQUATE FUNDING TO THE MILITARY

For too long, successive governments have called on military women and men to do more and more — yet these governments have failed to invest in the tools required for the job. Today, spending on the military is 0.88% of Canada's gross domestic product (GDP), well short of our commitment as part of the NATO alliance to spend 2% of GDP on our own security and defence needs.

At the same time, spending on defence has been shrinking as a percentage of total government expenditure. This is a troubling sign for the military.

Today, Canada ranks 23rd of 28 NATO members when it comes to spending on our own defence. This is unacceptable.

Chronic underfunding of the military and buck passing must stop.

When it comes to providing leadership, military commanders should not serve as cheerleaders for the government. Instead, they should clearly outline their solutions as to where specifically they plan to save money on infrastructure (e.g. by naming the facilities and bases they intend to close) and outline what steps they are taking to ensure the military needs as identified by the Defence Acquisition Guide, the Auditor General of Canada, the ombudsman for the Canadian Armed Forces, industry experts and this Committee are met.

1. INCREASE SPENDING TO 2% OF GDP TO ENSURE SAFETY AND SECURITY IS MAINTAINED (Page 15)

The Committee is convinced that Canada must increase defence spending to 2% of GDP starting in 2018 and continue increasing spending by 0.1% of GDP each year until 2028. *To see how we get there, please refer to the table on Page 18.* This proposal will reverse the decline in spending and will put the military on a course to be able to fulfil the stated government requirement to simultaneously meet Canada's obligations to NORAD and NATO, as well as to providing the necessary security for our own citizens.

To do any less risks the safety and security of Canadians.

2. FIXING CANADA'S MILITARY PROCUREMENT SYSTEM (Page 33)

The government must fix Canada's shambolic military procurement system. It is a system that involves too many departments and where it appears that — as one witness put it — *“Everyone is accountable and no one is accountable.”* Failure to fix this system leads to increase costs of over \$1 million per day, capacity gaps and unnecessary maintenance costs as well as to reduced buying power. Continuing this broken system is unacceptable.

To successfully fix the larger problems of military procurement, and to bring Canada in line with our allies, the committee recommends that the Department of National Defence — not Public Services and Procurement Canada — needs to be in charge of military procurement. This will require a complete revamp of how military procurement is done. Rather than carrying on as usual, the government should seize the opportunity and bring forward meaningful changes to this dysfunctional system.

To address immediate weaknesses in the procurement process, the Committee recommends that the government adapt its policies so that the Minister of National Defence can appoint a lead negotiator and interlocutor for each procurement project valued at over \$1 billion and assign responsibility and accountability.

3. DO MORE TO COORDINATE CYBER DEFENCES AND PROTECT CRITICAL INFRASTRUCTURE (Page 28)

Canada's critical infrastructure is vulnerable. The Committee review this subject on page 28 of the report and recommends that the Government of Canada explore opportunities to coordinate an integrated joint cyber defence strategy with the United States as well as other countries and report to Parliament on best options within 180 days and that it:

- designate satellites and radar installations as critical infrastructure; and
- seek ways to secure the full spectrum of all critical infrastructure assets against significant threats, including electromagnetic pulses, by 2020 in partnership with the United States and other countries.

4. REGULAR REVIEW OF DEFENCE POLICY REQUIRED (Page 25)

To be effective, Canada's new defence policy must not exist in a vacuum. The government should commit to a review of the military every four years.

Since the last comprehensive review of Canada's defence and foreign policies over 20 years ago, the nature and complexity of threats to our national security have changed profoundly. While conventional military capabilities and decision-making continue to be important, our adversaries are able and willing to use every available tool — conventional military operations, insurgency, terrorist attacks, and full-spectrum cyber campaigns — to achieve their objectives. This transformation in the security environment requires a strategic rethinking of Canada's defence policy — how it is made and what it takes to implement it. It also requires a broader review of national security and international policy objectives.

The Committee recommends that the Government of Canada conduct and conclude reviews of Canada's national security strategy and foreign policy before the end of 2017 to ensure coordination and integration into the Defence Policy Review.

5. BUILD CROSS-PARTY CONSENSUS ON MILITARY ISSUES (Page 26)

The Minister of National Defence is responsible for informing and educating Canadians about the role of the military and what it does to ensure security and stability while supporting Canadians when they are most in need, particularly during emergencies such as floods, ice storms, or on search and rescue missions in the high seas, the rugged wilderness or in the far north. More must be done.

The committee notes that defending Canada should be an issue that is above partisan politics. Canadians want more cooperation between political parties as we move forward.

Developing an effective defence policy requires broad public and political support and engagement. The Committee believes that it is essential to build political consensus around national security priorities and to open up defence policy to regular review. Parliamentary committees are the best mechanism to develop this cross-party consensus and to provide oversight of key defence policy and procurement issues.

The Committee recommends:

- that the Government of Canada work with the Senate and the House of Commons to establish cross-party consensus on issues related to the military and veterans;
- That the Minister of National Defence ensure members of the three services meet more regularly with parliamentarians, in committee and in their constituencies to further the understanding of the role of the Canadian Armed Forces and their requirements; and
- That the Prime Minister regularly brief the Leader of the Official Opposition and the leader of the third party on matters of national security and defence.

CONCLUSION

The federal government can no longer continue underfunding the military and delay addressing the urgent capacity gaps that have been created.

After careful study and with the benefit of testimony from expert witnesses, this Committee has made a number of recommendations to give the military the tools it needs to keep Canada safe.

Successive governments have talked a good game when it comes to the military but — as the Committee's report makes clear — **the walk must match the talk.**

RECOMMENDATIONS

Recommendation 1:

That the Government of Canada make the necessary defence investments to ensure that the Canadian Armed Forces are fully equipped and trained to effectively carry out Canada's key defence priorities: the protection of Canadian sovereignty, including in the Arctic; the defence of North America under NORAD; and full participation in NATO as well as the United Nations and other multilateral international operations.

Recommendation 2:

That the Government present a budget plan to Parliament within 180 days to increase defence spending to 1.5% of GDP by 2023 and to 2% of GDP by 2028.

Recommendation 3:

That the Government of Canada implement a long-term funding framework to secure stable and sustained investments to renew the core capabilities of the Canadian Armed Forces, while increasing transparency and accountability and eliminate the issue of lapse funding for the operational needs of the Canadian Military.

Recommendation 4:

That as funding for the defence of Canada is increased the government systematically provides funding for these identified priorities in the Defence Acquisition Guide and that it update the guide to reflect:

1. The specific project;
2. Whether the project is funded or unfunded;
3. When each project will be funded; and
4. When the acquisition will be completed.

Recommendation 5:

That the Minister of National Defence report to Parliament within 180 days on progress made under the Defence Renewal/Transformation strategy, and annually thereafter.

Recommendation 6:

That the Government of Canada complete reviews of Canada's national security strategy and foreign policy before 2018 to ensure coordination and integration with the Defence Policy Review.

Recommendation 7:

That the Government of Canada conduct a legislatively mandated defence policy review every four years, involving broad public consultations.

Recommendation 8:

That the Government of Canada work with both the Senate and the House of Commons to establish a cross-party consensus on issues related to the military and veterans issues.

Recommendation 9:

That the Minister of National Defence ensure members of the three services (Army, Air Force and Navy) meet with parliamentarians at least annually, in committee and in their constituencies to further the understanding of the role of the Canadian Armed Forces and their requirements.

Recommendation 10:

That the Prime Minister regularly brief the Leader of the Official Opposition and the Leader of the third party on matters of national security and defence.

Recommendation 11:

That the Parliament of Canada establish a Special Joint Parliamentary Committee with the Senate and House of Commons to study and report on Military Procurement.

Recommendation 12:

That the Government of Canada explore opportunities to coordinate an integrated joint cyber defence strategy with the United States as well as other countries and report to Parliament on best options within 180 days.

Recommendation 13:

That the Government of Canada:

1. designate satellites and radar installations as critical infrastructure and
2. seek ways to secure the full spectrum of all critical infrastructure assets against significant threats, including electromagnetic pulse, by 2020 in partnership with the United States and other countries and that it report to Parliament in 180 days, and annually thereafter.

Recommendation 14:

That the Government of Canada become a full partner with the United States on Ballistic Missile Defence; provide strategic locations for radar installation; and collaborate on joint research and technology partnerships.

Recommendation 15:

That the Minister of National Defence appoint a lead negotiator and interlocutor for each procurement project valued over \$1 billion dollars and assign responsibility and accountability.

Recommendation 16:

That the Government:

1. Mandate that the Minister of National Defence acquire and deliver the right equipment to the Canadian Armed Forces in a timely manner; leverage purchases of defence equipment to create jobs and economic growth; and, streamline defence procurement approval processes;
2. Transfer responsibilities for all defence and Coast Guard procurement from Public Services and Procurement Canada to the Department of National Defence;
3. Establish a major military procurement agency within the Department of National Defence; and
4. Take the steps, on an interim basis, to ensure that current major procurement projects proceed expeditiously and responsibly, both by
 - a) contracting procurement experts while training, deploying and developing a plan to retain in-house staff; and
 - b) by ensuring direct ministerial oversight of all major procurements to ensure that they advance on time and on budget.

OVERVIEW

In early April 2016, the Government of Canada launched public consultations as part of its Defence Policy Review. The goal was to launch a new policy in early 2017. In addition to the Defence Expert Roundtables, online and public consultations, the government reached out to parliamentary committees and parliamentarians for help in developing the new policy.¹ Minister of National Defence Harjit Sajjan wrote to the Standing Senate Committee on National Security and Defence (the Committee) on 22 March 2016, highlighting his particular interest in hearing the Committee's views on "how National Defence and the [Canadian Armed Forces] CAF can contribute to renewing Canada's commitment to United Nations [UN] peace support operations."² In response, the Committee held hearings examining Canada's potential re-engagement in United Nations peace support operations, and participated in a fact-finding mission to United Nations headquarters. The Committee's recommendations related to this specific issue can be found in its report entitled [UN Deployment: Prioritizing Commitments at Home and Abroad](#).

The Committee also takes this opportunity to provide advice to the government on the Defence Policy Review, and to reiterate its earlier recommendation that enhanced participation in United Nations peace support operations must always be viewed where Canada's first and foremost priority is the defence of Canada and the maintenance of our sovereignty on land, in the air, and in all three seas.

Likewise, the Committee believes that any recommitment to a peace support operation can only be properly understood, and therefore evaluated, in the context of these same objectives. At the same time, these defence policy objectives must themselves be informed by a renewed national security strategy. This strategy must be comprehensive, develop and reflect a national public consensus, and have enough cross-party support to survive changes of government.

During the past year, the Committee heard from numerous defence and security experts, serving and retired members of the Canadian Armed Forces, representatives of government departments, and academics. Their testimony shed light on significant challenges for the military that affect Canada's ability to defend its territorial sovereignty, carry out the country's continental responsibilities in conjunction with the United States under the North American Aerospace Defence Command (NORAD), and operate as a credible partner with our international allies within the North Atlantic Treaty Organization (NATO), the United Nations and elsewhere.

The Committee believes that Canada's women and men in uniform are already expected to do too much with too little. This must change. The government must take a hard look at what Canada needs to defend itself and its interests, and then get on with funding these needs. **The walk must match the talk.** As Lieutenant-General (Retired) Michael Day, Fellow, Canadian Global Affairs Institute, told the Committee, "I do believe that Canada has a role to play, and I believe that the world benefits from more Canada in the world. But we must be clear at the front

¹ Government of Canada, "[Minister Sajjan Launches Public Consultations on Defence Policy Review](#)," News Release, 6 April 2016.

² Letter from the Minister of National Defence Harjit S. Sajjan to the Honourable Daniel Lang, Chair of the Standing Senate Committee on National Security and Defence [SECD], 22 March 2016.

end of the requirements of a successful operation, and set Canada and its Canadian Forces members up for success.”³

SUCCESSIVE GOVERNMENTS FALLING BEHIND IN MAKING INVESTMENTS IN OUR SECURITY

The purpose of spending on the military is first and foremost for the defence of Canada. It has become clear to the committee that governments have been failing to make the necessary investments in our own security, either because of poor planning in recruiting, training, and equipment procurement; the perceived lack of immediate threats or because of a relative comfort of relying on the United States of America for our security. As the world becomes a more complex place, especially with rogue regimes and non-state actors seeking and acquiring biological, nuclear and chemical weapons, mobile missile launch capabilities, Canada should not rely on others to protect our national interests and defend our sovereignty. We must not rely on others to respond to emergencies within our own borders. We must take responsibility for our own defence and make the necessary investments to secure our country from all threats which affect the day to day lives of Canadians, as well as our economic and political stability. We must learn the lessons from 9/11 as to how disruptive terrorism could be to our well-being. Finally, we must be prepared to project to the world, our capabilities and our willingness to support allies and international missions in keeping with our values and commitments.

While the issues outlined in this report are wide-ranging, the Committee heard that they are not insurmountable. Significant resources have been invested over the last decade which have allowed us to renew and modernize many of our military capabilities. These investments should be sustained. At the same time, the Defence Policy Review also provides an opportunity to tackle the many long-standing challenges that hinder the development of a more capable and sustainable military, including: an ineffective and inefficient bureaucracy, a broken defence acquisition system and the failure to increase, train, retain and support the personnel needed to meet Canada’s security needs. These challenges are examined throughout the report that follows.

We will not let Canada’s future be shortchanged.

In the Committee’s view, chronic underfunding and a dysfunctional procurement system are core issues that have brought the Canadian Armed Forces to the breaking point. Simply put, for too long, the Department of National Defence’s ambitious capital acquisition program has been backed by neither money nor knowhow. In general, the Committee supports ongoing defence transformation efforts. However, it is concerned that progress towards this end is so slow and haphazard that the Canadian Armed Forces’ existing capabilities will fail catastrophically. Sooner or later, we will suffer the consequences of trying to operate our military on the cheap; inadequately equipped and, therefore, inadequately trained.

³ The Standing Senate Committee on National Defence and Security (SECD), [Evidence](#), 19 September 2016, Lieutenant-General (Retired) Michael Day.

Commitments Made During The 2015 Election Campaign

When it comes to investing in the defence of Canada through support for the military, the committee takes careful note of the commitments made by the current Prime Minister during the 2015 election campaign.

We will not let Canada's Armed Forces be short changed, and we will not lapse spending from year to year. We will also reinvest in building a leaner, more agile, better equipped military including adequate support systems for military personnel and their families.

(Page 69, REAL CHANGE: A PLAN FOR A STRONG MIDDLE CLASS)

Unlike [the previous government], we will have the funds that we need to build promised icebreakers, supply ships, arctic and offshore vessels, surface combatants, and other resources required by the Navy.

(Page 70, REAL CHANGE: A PLAN FOR A STRONG MIDDLE)

Insufficient Funding for Canada's Defence

Before discussing its concerns about defence funding, the Committee wishes to acknowledge that some national capabilities have been substantially improved over the past decade under governments of both political stripes. It is with these gains in mind that the Committee therefore stresses the importance of identifying and building on success where it has occurred.

The 2008 *Canada First* Defence Strategy attempted to establish long-term objectives and commitments for annual defence spending and equipment acquisition. Through the Strategy, the government committed to increase defence spending over a twenty-year period, from approximately \$18 billion in 2008–2009 to over \$30 billion by 2027–2028. The Canadian Armed Forces would expand to 70,000 Regular Forces and 30,000 Reserve Forces personnel, its readiness to deploy and ability to sustain operations once deployed would be increased, and its defence infrastructure improved and modernized. Over the following decades, the Canadian Army, Royal Canadian Navy and Royal Canadian Air Force were all to be provided with new weapons systems and equipment.

The *Canada First* Defence Strategy also announced several key defence procurement projects. These were broken down into three main categories: projects announced prior to the introduction of the Strategy, new major fleet replacement projects, and other capital projects. Overall, the *Canada First* Defence Strategy announced government plans to spend \$490 billion on defence over 20 years. About 12% of the \$490 billion (\$60 billion) pertained to the acquisition of new defence equipment. The remainder was for personnel (\$250 billion), readiness (\$140 billion) and infrastructure (\$40 billion).⁴

Three years later, in 2011, the then Lieutenant-General Andrew Leslie, who has since retired and become a Member of Parliament, presented his plan to transform the Canadian Armed Force to the Minister of National Defence⁵. Entitled [Report on Transformation 2011](#), Lieutenant-General

⁴ Department of National Defence [DND], [Canada First Defence Strategy](#), 2008, pp. 1–21. See Appendix A for a table providing a status update on key commitments made by the *Canada First* Defence Strategy.

⁵ DND, [Report on Transformation 2011](#).

(Retired) Leslie's plan called for significant cuts in the size of National Defence Headquarters staff, including the reassignment of 3,000 military personnel. A key objective of this transformation plan was to increase the Department of National Defence's "tooth to tail" ratio by reassigning military personnel back out to the field. The transformation report also called on the government to increase the annual funding of its capital investment plan by \$1 billion. In Lieutenant-General (Retired) Leslie's view, the *Canada First* Defence Strategy's capital investment plan was inadequately funded.

Both the government of the day and the current government said they would act on Lieutenant-General (Retired) Leslie's recommendations, thus enabling delivery on some of the commitments made in the *Canada First* Defence Strategy. Unfortunately, and as one of the witnesses, Dr. David Perry, pointed out to the Committee, the Canadian Armed Forces and the Department of Defence have yet to recover from budget cuts that took place in the wake of the 2010 Strategic Review.⁶ The department's materiel group, he said, is still struggling to hire back project management expertise it lost in these cuts.⁷

Based on what it heard from witnesses, the Committee is not convinced that the transformation report's recommendations are being acted on in good faith.

The current Prime Minister committed during the 2015 election campaign to "*implement the recommendations made in the Canadian Forces' Report on Transformation.*" However, he failed to make reference to this commitment in the Minister of Defence's mandate letter and Parliament has not been informed of which recommendations are being implemented.

While the Defence Renewal Team was established by the Department of National Defence in 2012 to "minimize inefficiency, streamline business processes and maximize operational results"⁸, we appear to be losing ground. The 2013 [Defence Renewal Charter](#) was developed to guide renewal efforts across the organization towards the delivery of "the best military capabilities for the best value for Canadians."⁹ Yet, some witnesses cautioned that without increases in defence spending, the readiness levels of the Canadian Armed Forces would be compromised and recapitalization plans further delayed. Based on this premise, Colonel (Retired) Tony Battista, CEO of the Canadian Defence Association and the Canadian Defence Association Institute underscored that the Canadian government has difficult choices to make in devising a new defence policy:

The government, therefore, has two options: increase funding to adequate levels to fulfil [the Canadian Armed Forces's primary and recently proposed] defence requirements, or recalibrate these requirements and the force structure that goes with it to better fit the prospective spending envelope. Neither option will be easy. The first will require the government to substantially and immediately increase the resources allocated to defence, even though such a move may not be politically expedient at a time of larger than expected deficits. The second will also require being highly disciplined in prioritizing defence

⁶ SECD, [Evidence](#), 14 November 2016, David Perry.

⁷ SECD, [Evidence](#), 14 November 2016, David Perry.

⁸ DND, "[Defence Renewal Overview](#)," 11 March 2016.

⁹ DND, [Defence Renewal Charter Summary](#)," 7 October 2013.

commitments, making hard choices on the CF core structure, and even then, there are dangers of getting it wrong.¹⁰

Parliamentary Budget Officer Identifies Insufficient Funding For Military

Evidence pointing to the unsustainability of current national defence program spending levels was corroborated by a 2015 study conducted by the Office of the Parliamentary Budget Officer – mandated to independently analyze Canada’s finances over which Parliament has jurisdiction. Peter Weltman, Senior Director in that office, told the Committee that the study, entitled, *Fiscal Sustainability of Canada’s National Defence Program*, “showed there was a funding gap” - meaning that a forecasting estimate found the Department of National Defence’s force structure to be unsustainable at 2015 funding levels and over the following 10 years.

The re-equipment needs of the Canadian Armed Forces are significant. The Department of National Defence’s 2016 Defence Acquisition Guide (DAG) outlines well over 100 medium and long-term procurement requirements needed just to sustain the current core capabilities of the Armed Forces. A full list can be found in Appendix B.

Government Only Funding 1/3 of Military Needs

Mr. Perry, Senior Analyst and a Fellow with the Canadian Global Affairs Institute told the Committee that currently “there is roughly three times more demand for actual project funding than there is available money. That’s left the capital acquisition budget short by several tens of billions of dollars, even considering the planned increase of the defence budget [instituted by the Harper Government which the current Government] has promised to honour”. Perry noted that “Resolving this mismatch between the demands of the defence policy and the available funding must be a central focus of the defence policy review ...”¹¹

More than \$2 Billion per year in new money needed to maintain DND’s current operations

Perry further notes in the *Canadian Naval Review* that “Public documents suggest that the capital equipment budget is short by roughly \$2 billion a year over the long term, given extant policy commitments. In addition, the Department is short changed by several thousand positions according to the 2011 Report on Transformation. Based on these two facts alone, at least \$2 billion annually would be required simply to allow DND to resource a status quo defence for structure.”¹²

Unfortunately, the government has not yet acted on warnings from the Parliamentary Budget Officer and from industry experts to increase spending to be able to maintain current operations and to address the significant gaps which will affect the safety and security of all Canadians.

¹⁰ SECD, [Evidence](#), 20 June 2016, Tony Battista.

¹¹ SECD, [Evidence](#), 1 February 2016, David Perry.

¹² Canadian Naval Review, Volume 12, Number 4 (2017)

PRIORITIZE DEFENCE COMMITMENTS

Cognizant of the diverse range of threats confronting Canada, the Committee sought guidance from witnesses on how Canada should prioritize use of its finite military resources. The Committee heard that among the Canadian Armed Forces' core missions, its first priority must be Canada's national defence. Next, because it is so inextricably linked to national defence is defence of North America through Canada's partnership with the United States in NORAD. Participation in NATO and multilateral international operations under the United Nations also contribute significantly to Canada's national security by addressing threats before they can reach Canada.

Thus, if national defence and NORAD represent the two highest priority missions assigned to the Canadian Armed Forces, then priority must be given to providing the Canadian Armed Forces the recruitment, training and equipment it requires to succeed in these missions. While Canada can and should continue to fully participate in the Alliance and commit to missions that enhance international security, it can best accomplish this by drawing on those capabilities that it must acquire to carry out its primary territorial and North American defence tasks. Prior to increasing any commitments for United Nations peace support operations, therefore, the government must ensure that adequate funding is available to meet the current national and international operational priorities for the Canadian Armed Forces.

That the focus of Canada's new defence policy must therefore remain the defence of Canada; followed by the defence of North America in cooperation with the United States through NORAD; participation in NATO; and, finally, contributions to the United Nations and other multilateral international operations, in that order.¹³

Defending Canada's sovereignty entails a wide-range of activities and responsibilities, including "regularly training and preparing for war to safeguarding Canadian territory, monitoring and patrolling Canada's skies and waters, exercising sovereignty in the Arctic and elsewhere, conducting search and rescue, supporting domestic law enforcement agencies, and assisting civilian authorities with disaster relief in times of emergency, among other things."¹⁴ Tens of thousands of Canadian military members contribute to territorial defence and sovereign control on a daily basis, working across the vast expanse of our country and along its three coasts.¹⁵

Ensuring mission success in the national defence task also requires the Canadian Armed Forces to work with domestic partners. It is for this reason that Mr. Battista recommended that the new defence policy be supported by "other government departments and agencies" so that "that the Canadian government can and will apply the full range of whole-of-government actions in any

¹³ SECD, [Evidence](#), 20 June 2016, Tony Battista, Colonel (Retired) Charles Davies; Colin Robertson, Major-General (Retired) Daniel Gosselin; SECD, [Evidence](#), 13 June 2016, the Honourable Peter MacKay.

¹⁴ House of Commons Standing Committee on National Defence, [Canada and the Defence of North America](#), 41st Parliament, 2nd Session, 2015.

¹⁵ House of Commons Standing Committee on National Defence, [Evidence](#), 15 November 2016, General Jonathan Vance, Chief of the Defence Staff, Department of National Defence and the Canadian Armed Forces.

given situation at home. This is a no-fail part of the defence policy in any mission that the armed forces are assigned.”¹⁶

Interoperability is Essential

Through NORAD, the Canadian Armed Forces also ensure our continental defence in partnership with the United States. Under this binational defence agreement, Canadian military personnel work in close cooperation with their American counterparts in carrying out NORAD’s mission: conducting aerospace warning, aerospace control, and maritime warning in the defence of North America.¹⁷ The Committee heard that interoperability is integral to the success of this mission. Ensuring this ongoing interoperability will require a defence policy that articulates the need for full interoperability and integration in terms of command, control and execution. At the same time, however, the Committee heard that [f]or this to take hold, Canada must assume its fair but not necessarily equal share of the defence burden for protecting the North American continent, including air, land, sea, space and cyber approaches to the continent and the Arctic.¹⁸

Vice-Admiral (Retired) Denis Rouleau, Chair, Conference of Defence Associations, similarly argued that “it is part of our responsibility to remain with NORAD and to fulfil our commitment.”¹⁹

Ensuring the readiness of the Canadian Armed Forces in the context of defending North America is a task that has assumed added urgency in light of Russia’s enhanced assertiveness. David Perry, Senior Analyst with the Canadian Global Affairs Institute said that domain awareness has become particularly critical since “increased Russian activity around North America” and we “need to enhance our ability to know what’s happening in all three of our coastal approaches, and especially in the Arctic.”²⁰

While the Canadian Armed Forces contribute to the maintenance of international peace and stability through a range of bilateral, regional and multilateral arrangements, many witnesses observed that Canadian contributions to NATO should be prioritized. For over 65 years, NATO’s essential mission – “to ensure that the Alliance remains an unparalleled community of freedom, peace, security, and shared values”²¹ – has linked North American and European security together. While the principle of collective defence has promoted stability in the transatlantic region since its inception, the Alliance has also demonstrated its role as a contributor to global peace and security. As a founding member of NATO, Canada’s participation in the military alliance has long been a cornerstone of Canadian defence and security policy. As Major-General (Retired) Jim Ferron stressed, “[o]ur centre of gravity is the credibility in working within alliances to achieve collective defence. Consequently, a level of interoperability in thought, purpose, and equipment is

¹⁶ SECD, [Evidence](#), 20 June 2016, Tony Battista.

¹⁷ NORAD’s mission is to conduct “aerospace warning, aerospace control, and maritime warning in the defense of North America.” See North American Aerospace Defense Command, “About NORAD.”

¹⁸ Ibid.

¹⁹ SECD, [Evidence](#), 20 June 2016, Vice-Admiral (Retired) Denis Rouleau.

²⁰ SECD, [Evidence](#), 14 November 2016, David Perry.

²¹ North Atlantic Treaty Organization (NATO), [Warsaw Summit Communiqué](#), 3 August 2016.

required with our NORAD, our NATO, our UN and any coalition of forces agreed to by the government... Clearly, we cannot do this alone.”²²

Not all NATO countries have the same capabilities, but the Alliance enables weak and strong members to train together and participate in multilateral operations using the same operational standards and, ideally, interoperable equipment. Working together in a standardized manner, makes the whole greater than its parts and thus mitigates risk, particularly for the weaker members. As Major-General (Retired) Daniel Gosselin, Chair of the Board Conference of Defence Associations Institute explained, “[u]nless you are the U.S., the U.K., or France, and even then, most will rely on other countries to help mitigate some of the risks or provide enablers to give them leverage.”²³

Former Minister of National Defence, the Honourable Peter MacKay also spoke to the importance of interoperability with both NORAD and NATO: “the first time NATO went out of area for operations was Afghanistan, and that element of interoperability was absolutely critical. The same, I would suggest, is true of NORAD, for North America. The equipment, training and our ability to project force into all areas of those organizations is very demanding and resource-intensive, but we have to do it. I would suggest that these are issues we shouldn't necessarily be debating. We should be finding ways to move forward.”²⁴ In the words of Major-General (Retired) Ferron, “we cannot afford not to be interoperable.”²⁵

Professor Elinor Sloan, Professor of International Relations at Carleton University, echoed concerns about Russian military advancements, and drew attention to the country's expansionist activities in Eastern Europe. In her view, Canada “should prioritize our NATO commitments. My number one recommendation would be to support the effort to boost military forces in the Baltic region versus Russian aggression.”²⁶

The deterrence factor associated with Canada's participation in - and contributions to - both NORAD and NATO was reinforced by Lieutenant-General (Retired) Bouchard, as “any attack on North America comes at a very high risk for any potential aggressor. NORAD and, indeed, Article 5 of the NATO alliance provide assurances for this country.”²⁷

Nevertheless, several witnesses agreed that Canada has not been paying its fair share towards collective defence. David Perry highlighted the need to “upgrade the North American defence infrastructure” yet explained “[h]istorically the United States has carried different fractions and different shares, but in every case the majority of the funding has been borne by the United States for those previous efforts.”²⁸ Lieutenant-General (Retired) Louis Cuppens, Special Advisor with the Canadian Peacekeeping Veterans Association, said that Canada should

²² SECD, [Evidence](#), 20 June 2016, Major-General (Retired) James R. Ferron

²³ SECD, [Evidence](#), 20 June 2016, Major-General (Retired) Daniel Gosselin.

²⁴ SECD, [Evidence](#), 13 June 2016, the Honourable Peter MacKay.

²⁵ SECD, [Evidence](#), 20 June 2016, Major-General (Retired) James R. Ferron.

²⁶ SECD, [Evidence](#), 20 June 2016, Elinor Sloan.

²⁷ SECD, [Evidence](#), 19 September 2016, Lieutenant-General (Retired) Charles Bouchard.

²⁸ SECD, [Evidence](#), 14 November 2016, David Perry.

prioritize meeting NATO defence spending targets of 2% of Gross Domestic Product (GDP) and reduce the extent to which Canada acts, as he described, as a “defence freeloader.”²⁹

Indeed, our closest military ally has recently called on Canada to increase contributions to collective defence. In his 2016 address to the Canadian Parliament, former United States President Barack Obama said that “we’ll be more secure when every NATO member, including Canada, contributes its full share to our common security.”³⁰ The new Trump administration has warned that the United States could “moderate” its commitment to NATO if other Alliance members do not meet their spending targets. During a recent visit to NATO in Brussels, American Defense Secretary James Mattis urged his fellow defence ministers to meet their 2% target contributions to the Alliance and warned that NATO countries should not take United States government support for granted.³¹

NATO: Canada Ranks 23rd of 28

During his testimony, David Perry confirmed that **“Canada is twenty-third out of twenty-eight member nations in terms of our contribution as a share of our gross domestic product, now at under 1 per cent of GDP.”**³²

Pressure to commit additional resources to NATO has also come from the organization’s leadership. “The Secretary-General...has encouraged all countries, including Canada, to contribute to the operations that NATO is looking for support for in Eastern Europe in the face of Russian aggression,” Colin Robertson, Vice-President, and Fellow, School of Public Policy, University of Calgary, Canadian Defence and Foreign Affairs Institute, explained.³³ Some witnesses suggested that defence spending in the amount of 2% - as per NATO targets - was unrealistic for Canada.³⁴ David Perry clarified that in order to meet NATO spending targets of 2% GDP, Canada would have to spend an additional \$20 billion on defence over and above current defence spending of \$18.64 billion for the fiscal year 2016–2017, as requested in the Main Estimates.³⁵

In the view of the Honourable David Pratt, former Minister of National Defence, “the defence budget has to increase if the government wants to do everything it has mapped out for itself to do.”³⁶

²⁹ SECD, [Evidence](#), 20 September 2016, Lieutenant-General (Retired) Louis Cuppens.

³⁰ The Toronto Star, [“Barack Obama’s full speech to the House of Commons,”](#) 29 June 2016.

³¹ CNN Politics, [“Trump defense chief Mattis tells NATO members to pay up,”](#) 15 February 2017

³² SECD, [Evidence](#), 14 November 2016, David Perry

³³ SECD, [Evidence](#), 20 June 2016, Colin Robertson.

³⁴ SECD, [Evidence](#), Major-General (Retired) Daniel Gosselin; Vice-Admiral (Retired) Denis Rouleau.

³⁵ SECD, [Evidence](#), 14 November 2016, David Perry. See also Government of Canada, [“Main Estimates 2016-2017”](#), *National Defence*, p. I-9.

³⁶ SECD, [Evidence](#), 13 June 2016, the Honourable David Pratt.

The Honourable Peter MacKay, former Minister of National Defence, underscored that “However and whatever we do, it must leave room for us to complete our NATO and NORAD obligations... I come back time and again to the fact that we cannot be neglectful of our NATO commitments, which are solemn obligations that go back to the end of the Second World War.”³⁷

Lieutenant-General (Retired) Charles Bouchard underlined that, in today’s security environment, the defence of Canada “extends well beyond our borders, our air space and our maritime environment.”³⁸ Indeed, in recent months, the Government of Canada has committed a battlegroup of 450 troops in Latvia as part of NATO’s assurance measures in Eastern Europe and has also pledged to send up to 600 Canadian Armed Forces personnel on possible deployment to United Nations peace operations in Africa. Canada is also contributing approximately 830 military personnel to the global coalition to counter ISIL.³⁹

In addressing Canada’s ability to balance its primary mission – the defence of Canada – with its obligations to continental defence through NORAD, its participation in the international coalition to counter ISIL, and the recent government commitments to both Latvia and a potential peacekeeping mission in Africa, David Perry inferred that Canada will have the capacity to sustain these commitments “for a rotation or two, depending on the length of those rotations” but that it would “put some pressure on our logistical support abilities to keep three lines of operations going.”⁴⁰

While Chief of Defence Staff General Vance testified that “the force right now is fully capable of doing that which has already been announced”⁴¹, the Committee is concerned that committing Canadian military resources to additional multilateral engagements overseas will hinder the Canadian Armed Forces’ ability to prioritize its domestic and continental responsibilities.

Generally, witnesses emphasized that Canada should focus on its primary defence priorities, namely the defence of Canada, North America and the Arctic, and that new commitments – such as augmented participation in UN peace operations – would require an increase in resources. A recommendation to this effect was put forward by the Committee in its November 2016 report *UN Deployment: Prioritizing Commitments at Home and Abroad*.⁴² “I believe there is a general

³⁷ SECD, [Evidence](#), 13 June 2016, the Honourable Peter MacKay.

³⁸ SECD, [Evidence](#), 19 September 2016, Lieutenant-General (Retired) Charles Bouchard.

³⁹ Justin Trudeau, Prime Minister of Canada, “[Canada makes commitment to NATO Defence and deterrence measures](#),” 8 July 2016; Lee Berthiaume, “[Canada to send 450 troops to Latvia as NATO faces off against Russia](#),” *The Globe and Mail*, 8 July 2016. SECD, [Evidence](#), 21 September 2016, General Jonathan Vance.

⁴⁰ Ibid.

⁴¹ SECD, [Evidence](#), 21 September 2016, General Jonathan Vance.

⁴² Specifically, the recommendation called for a “Statement of National Interest: Prior to increasing the commitments for UN peace support operations, the government must ensure adequate funding is available to meet the current national and international operational priorities for the Canadian Armed Forces.” Report of the Standing Senate Committee on National Security and Defence, [UN Deployment: Prioritizing Commitments at Home and Abroad](#), November 2016, p.2.

consensus that the current dismal funding levels and the current defence program are unsustainable” said the Honourable David Pratt.⁴³

During his appearance, the Honourable Harjit Sajjan acknowledged that

The key roles of our military to defend Canada and North America, as well as to contribute to international peace and security, will endure. But the strategic context in which the Canadian Armed Forces operates has shifted, so we must take a broad look at what we can accomplish.⁴⁴

The Defence Policy Review Consultation Document holds that “[d]efence policy is an expression of the priorities for our military and a broad description of how they will be carried out.”⁴⁵ As such, the Committee strongly agrees with the Department of National Defence Ombudsman’s assessment that “[w]hatever future military path our country takes – or is obliged to take – we first have to ensure that what is broken in the system is fixed and does not continue to present hardship for thousands of men and women who, at great personal sacrifice, serve our country.”⁴⁶

The Committee therefore recommends:

Recommendation 1:

That the Government of Canada make the necessary defence investments to ensure that the Canadian Armed Forces are fully equipped and trained to effectively carry out Canada’s key defence priorities: the protection of Canadian sovereignty, including in the Arctic; the defence of North America under NORAD; and full participation in NATO as well as the United Nations and other multilateral international operations.

⁴³ SECD, [Evidence](#), 13 June 2016, the Honourable David Pratt.

⁴⁴ SECD, [Evidence](#), 30 May 2016, the Honourable Harjit Singh Sajjan.

⁴⁵ DND, [“Defence Policy Review Public Consultation Document,”](#) 2016.

⁴⁶ National Defence and Canadian Armed Forces Ombudsman, [“Our People, Our Security, Our Future: Report to the Minister of National Defence,”](#) *Submission to the Defence Policy Review*, July 2016, p. 2.

ADDRESSING THE STRATEGIC CHALLENGES FACING CANADA

Serving a Maritime Nation

Canada is a maritime nation. This is not just because it borders on three oceans, the world's longest coastline. Neither is it simply a reflection of our history, although seapower played a fundamental role in shaping North America's political destiny. Canada is a maritime nation because it trades.

The vast majority of global commerce travels by sea, including more than 90 per cent of consumer goods and two-thirds of the world's oil. Some one-third of Canadian Tire's® entire inventory at any one time is in containers on ships, making its way to Canadian markets to replace goods purchased off the shelf only weeks prior.

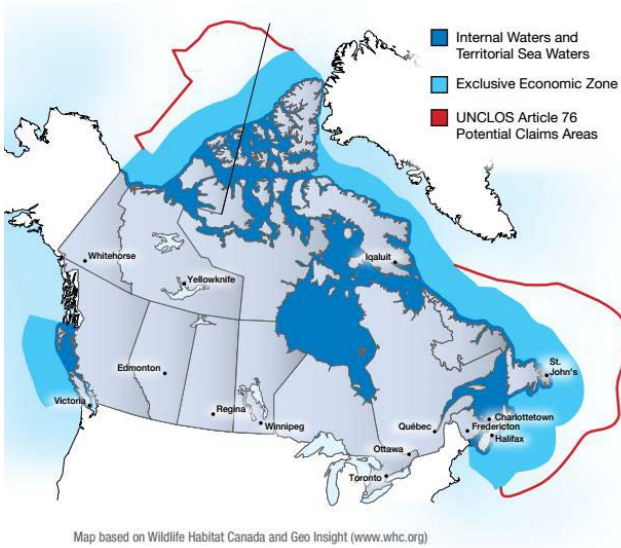
Maritime commerce depends upon lawful and unimpeded access to the high seas, a universal principle enshrined in the United Nations Convention on the Law of the Sea. That treaty also enshrines Canada's sovereign rights and responsibilities in its home waters, an immense region surrounding our coasts that is 70 per cent of the size of the country itself. This makes Canada one of the world's largest coastal states. It is also one of the richest in terms of the natural resources found in these waters.

Through the ongoing information and transportation revolutions, the Canadian and North American economies over the past several decades have been fundamentally restructured, reorganized and reintegrated into the global economy. Today, trade accounts for more than 60 per cent of Canada's economy, second highest in the G8. But even that doesn't tell the whole story.

Source: Royal Canadian Navy, Leadmark 2050

Emerging regional and international strategic challenges in Canada's circumpolar region as well as in the Indo-Asia-Pacific region must be taken into consideration as the Government reviews the capability needs of the Canadian Armed Forces in the 2020s and beyond. These challenges include, but are not limited to the following:

1. Protecting National Sovereignty and our Offshore Economic Zone



One of the World's Great Coastal States

Canada has an immense ocean estate, covering approximately 7.1M km², equal to about 70 per cent of the country's landmass.

The largest of our three ocean regions is the Arctic, followed by our Atlantic and Pacific approaches respectively. Almost one-half of the waters in Canada's ocean estate are internal or territorial waters, shown in the darker blue colour in the map opposite.

This is because Canada's landmass surrounds Hudson's Bay, the Gulf of St. Lawrence and the waters within the Arctic Archipelago. Canada has the world's:

- longest coastline – 243,042 km;
- 2nd largest continental shelf; and
- 5th largest exclusive economic zone – 5,543,913 km².

The solid red line in the map indicates the seaward extent of the additional areas that Canada has already submitted to an international tribunal in support of a claim to seabed resources under UNCLOS Article 76.¹

1. See [The Partial Submission of Canada to the Commission on the Limits of the Continental Shelf](#).

Diagram on p. 1 of Leadmark 2050

Defending Canada's sovereignty entails a wide range of activities and responsibilities. It involves monitoring and patrolling Canada's vast land mass, the world's longest coastline of 243,042 kilometres, as well as 7.1 million square kilometres of offshore ocean economic zone. It involves exercising sovereignty in the Arctic and elsewhere and supporting other government departments to fulfil their roles. The significant challenges involved in carrying out sovereignty protection are likely to grow as our Arctic becomes more accessible due to climate change and given the likely expansion of Canada's ocean estate through the United Nations Law of the Sea.

Furthermore, the effective protection of national sovereignty will require greater attention and investment in decades ahead. A wide array of capabilities will be required, including: satellites; Unmanned Ariel Vehicles; a robust helicopter fleet; modern fighter jets; supply ships, submarines, modern Coast Guard and naval patrol capabilities; the ability to operate effectively on both land and on and under the sea in the Arctic; and continual investment in a range of joint and enabling capabilities, including cyber.

2. Responding to National Emergencies

The Canadian military must also be prepared to respond to emergencies, natural or manmade (terrorism). This is a complicated issue given that Canada is a continent-sized country with a small population and a small military force. This challenge is reflected in the complexity of Search and Rescue operations, especially at high sea or in the Far North. Moreover, the military has been called upon to respond to flooding, earth quakes and other natural disasters within Canada and abroad. These demands demonstrate on a day to day basis, the positive contributions made

by the women and men of the Royal Canadian Navy, the Royal Canadian Air Force and the Army.

3. Defending our Air and Sea Approaches to Canadian Territory

As part of NORAD, Canada contributes to the defence of North America from the oceans and air. New security challenges as a result of ballistic missile threats from Iran and North Korea, as well as the emerging cyber threats require careful planning and preparation by the military. Other threats from such things as sea mines placed in our harbours in either Vancouver or Halifax, or in the Great Lakes, pose significant risks to daily life as well as the potential to significantly disrupt trade and commerce. It is essential that Canada's Armed Forces be well positioned to effectively defend against and deter such threats.

4. Responding to international security and humanitarian challenges

Canada contributes significantly to international security efforts and intends to do so going forward. The military must be prepared to answer the call so that Canada can do its part to contribute to international security and stability, whether as part of NATO, the UN or a coalition mission.

INADEQUATE FUNDING TO MEET NEEDS OF AIR FORCE AND NAVY

In his appearance on November 28, 2016, Lieutenant-General Michael Hood, Commander, RCAF, informed the committee that the government, “has now directed that we be ready to meet our daily NATO and NORAD commitments simultaneously.”⁴⁷ To fulfil this mandate, the expansion of the capabilities of both the Royal Canadian Navy and the Royal Canadian Air Force will be required.

This necessitates not only an expansion of Royal Canadian Air Force fighter capability, but also a full modernization of the North Warning System and the acquisition of improved supporting capabilities such as tanker aircraft, which is necessary for the refuelling of aircraft while in the air. With respect to maritime air capabilities, the Aurora maritime patrol aircraft have been extensively modernized but it is anticipated that these aircraft will require replacement by 2030. In more general terms, the Royal Canadian Air Force requires a strategic unmanned air vehicle capability, a modernization of its fighter capabilities and a range of other core and supporting capabilities.

Today’s air defence capabilities are insufficient.

It also follows that this same logic used in seeking to address the capability gap in relation to fighter jets will lead the government to move to expedite investments in the Royal Canadian Navy to allow Canada to meet its NORAD and NATO obligations in the maritime domain. This will require Canada to maintain an appropriate mix of ships, submarines, aircraft and unmanned vehicles on both the Atlantic and Pacific coasts to meet commitments at home and abroad, while retaining a naval task group at high readiness.

More specifically, to achieve this will require Canada to invest in new major surface combatants, modern submarines, effective coastal combatants, adequate numbers of support ships and improved maritime air capabilities. **The current capabilities of the Royal Canadian Navy are inadequate.**

While the National Shipbuilding Strategy aims to renew the Royal Canadian Navy’s surface fleet and restore a basic refuelling capacity, the current budget is inadequate. And no plans have yet been considered to acquire a modern submarine fleet or to renew the current fleet of coastal defence vessels. Additionally, there is an urgent need for four auxiliary oiler replenishment ships, two on each coast to provide much needed fuels and supply to war ships. The absence of this capability severely hampers the freedom of naval captains to sail as required as the amount and access to fuel determines the speed at which the ships travel, the destination and how it will operate.

If these emerging defence requirements are to be effectively carried out, significantly greater funding for the Department of National Defence will be required in the decades ahead. The defence budget will have to be increased toward the goal of meeting the NATO target for all allies to spend at least 2 percent of a country’s Gross Domestic Product on defence. Historically, Canada has met this target, as indicated in the chart below, however, for almost three decades, Canada has been spending significantly less than what is required for our own security needs.

⁴⁷ SECD, [Evidence](#), 28 November 2016, Lieutenant-General Michael Hood.

Investment in the military helps to guarantee our economic, political and social stability. We cannot wait until there are emergencies to make these investments, as it takes more than two years to build a frigate, or to have a broadly capable armed forces ready to go anywhere in the world, at any time.

Canada must prepare to face threats today, not wait until things go wrong. We must invest in a versatile, highly capable and professional armed forces, not pick niches! That will require an honest assessment of our weaknesses and the necessary funding to address them.

It is no secret that the new Trump Administration in the United States expects all members of NATO -- including Canada, who is also a partner in the defence of North America -- to pay its fair share for our security and defence. Given that Canada is 23rd out of 28 member nations, and spending less than 1% of our GDP on defence, the timing is right to reinvest in our military. This is particularly important, as Canada voluntarily committed to a 2% target as a member of the NATO Alliance, yet has not met this goal since 1990. We must start to carry our fair share of costs for our security and our national sovereignty. Relying on the United States to provide that for Canada is unacceptable.

The following charts illustrate the spending on defence as a portion of GDP.

MILITARY SPENDING IN CANADA 1960-2005 IN RELATION TO GDP

Year	Canadian military expenditure In current Canadian dollars	Canadian military expenditure as a percentage of GDP
1960	\$1,651,000,000.00	4.2%
1961	\$1,699,750,000.00	4.1%
1962	\$1,786,250,000.00	4.0%
1963	\$1,736,500,000.00	3.6%
1964	\$1,787,750,000.00	3.4%
1965	\$1,697,500,000.00	2.9%
1966	\$1,739,250,000.00	2.7%
1967	\$1,915,250,000.00	2.7%
1968	\$1,936,500,000.00	2.5%
1969	\$1,906,000,000.00	2.3%
1970	\$1,974,000,000.00	2.2%
1971	\$2,098,000,000.00	2.1%
1972	\$2,211,250,000.00	2.0%
1973	\$2,363,250,000.00	1.8%
1974	\$2,747,750,000.00	1.8%
1975	\$3,235,500,000.00	1.9%
1976	\$3,531,750,000.00	1.8%
1977	\$3,990,250,000.00	1.8%
1978	\$4,527,500,000.00	1.8%
1979	\$4,784,250,000.00	1.7%
1980	\$5,547,250,000.00	1.8%
1981	\$6,163,750,000.00	1.7%
1982	\$7,423,750,000.00	2.0%
1983	\$8,561,750,000.00	2.1%
1984	\$9,518,500,000.00	2.1%
1985	\$10,187,250,000.00	2.1%
1986	\$10,810,500,000.00	2.1%
1987	\$11,528,750,000.00	2.1%
1988	\$12,180,750,000.00	2.0%
1989	\$12,724,500,000.00	1.9%
1990	\$13,318,250,000.00	2.0%
1991	\$12,990,750,000.00	1.9%
1992	\$13,040,750,000.00	1.9%
1993	\$13,247,500,000.00	1.8%
1994	\$13,079,250,000.00	1.7%
1995	\$12,594,750,000.00	1.6%
1996	\$11,747,500,000.00	1.4%
1997	\$11,001,000,000.00	1.2%
1998	\$11,494,750,000.00	1.3%
1999	\$12,199,000,000.00	1.2%
2000	\$12,325,500,000.00	1.1%
2001	\$12,971,750,000.00	1.2%
2002	\$13,332,000,000.00	1.2%
2003	\$13,952,000,000.00	1.1%
2004	\$14,749,000,000.00	1.1%
2005	\$15,738,500,000.00	1.1%

Source: Stockholm International Peace Research Institute (SIPRI), [SIPRI Military Expenditures Database](#). Accessed 13 March 2017

PROPOSED INCREASE IN MILITARY SPENDING AS A PERCENTAGE OF GDP

Table 1 – Actual and Projected Gross Domestic Product (GDP), and Actual and Projected Total Program Expenditures and National Defence Expenditures, Canada					
	GDP	Total Program Expenditures	National Defence Expenditures ^b	National Defence Expenditures	
	\$ billions			National Defence Expenditures % of GDP	National Defence Expenditures % of Total Program Expenditures
2005-2006	1 419,2	177,4	14,7	1,04	8,28
2006-2007	1 489,8	190,7	15,7	1,05	8,22
2007-2008	1 570,6	202,6	17,5	1,12	8,65
2008-2009	1 656,6	212,1	19,2	1,16	9,05
2009-2010	1 571,4	248,3	19,9	1,26	8,00
2010-2011	1 666,7	243,3	20,3	1,22	8,34
2011-2012	1 770,3	244,3	20,2	1,14	8,28
2012-2013	1 823,5	246,2	20,0	1,10	8,12
2013-2014	1 897,8	248,6	18,8	0,99	7,55
2014-2015	1 967,8	253,8	18,5	0,94	7,27
2015-2016	1 976,6	270,8	18,7	0,94	6,89
2016-2017	2 025,0	290,9	18,6	0,92	6,41
2017-2018	2 109,0	305,4	18,7	0,88	6,11
2018-2019	2 194,0	313,7	24,1	1,10	7,69
2019-2020	2 271,0	319,8	27,3	1,20	8,52
2020-2021	2 357,0	328,6	30,6	1,30	9,32
2021-2022	2 447,0	338,5	34,3	1,40	10,12
2022-2023 ^a	2 486,2	N/a	37,3	1,50	N/a
2023-2024	2 525,9	N/a	40,4	1,60	N/a
2024-2025	2 566,3	N/a	43,6	1,70	N/a
2025-2026	2 607,4	N/a	46,9	1,80	N/a
2026-2027	2 649,1	N/a	50,3	1,90	N/a
2027-2028	2 691,5	N/a	53,8	2,00	N/a
2028-2029	2 734,6	N/a	54,7	2,00	N/a
2029-2030	2 778,3	N/a	55,6	2,00	N/a

Notes: a. The long term GDP forecast was calculated by the Department of Finance Canada based on labour supply and productivity growth. GDP is forecasted to grow at 1.6% for 2022-2023 onwards to 2029-2030. b. Projected National Defence expenditures are based on incremental increases necessary to attain 2% of GDP in fiscal year 2027-2028. *Projected figures.*

Sources: Table prepared by the author using data obtained from Budget 2017 (<http://www.budget.gc.ca/2017/docs/plan/toc-tdm-en.html>); Department of Finance Canada, Fiscal Reference Tables (<https://www.fin.gc.ca/frt-trf/2016/frt-trf-1602-eng.asp#tbl7>) and Update of Long-Term Economic and Fiscal Projections (<http://www.fin.gc.ca/pub/ltefp-peblt/pdf/ltefp-peblt-eng.pdf>); Receiver General of Canada, Public Accounts of Canada 2005-2006 to 2016-2017 (<https://www.tpsgc-pwgsc.gc.ca/recgen/cpc-pac/index-eng.html>); and the 2016-2017 and 2017-2018 Main Estimates (<https://www.canada.ca/en/treasury-board-secretariat/services/planned-government-spending/government-expenditure-plan-main-estimates.html>)

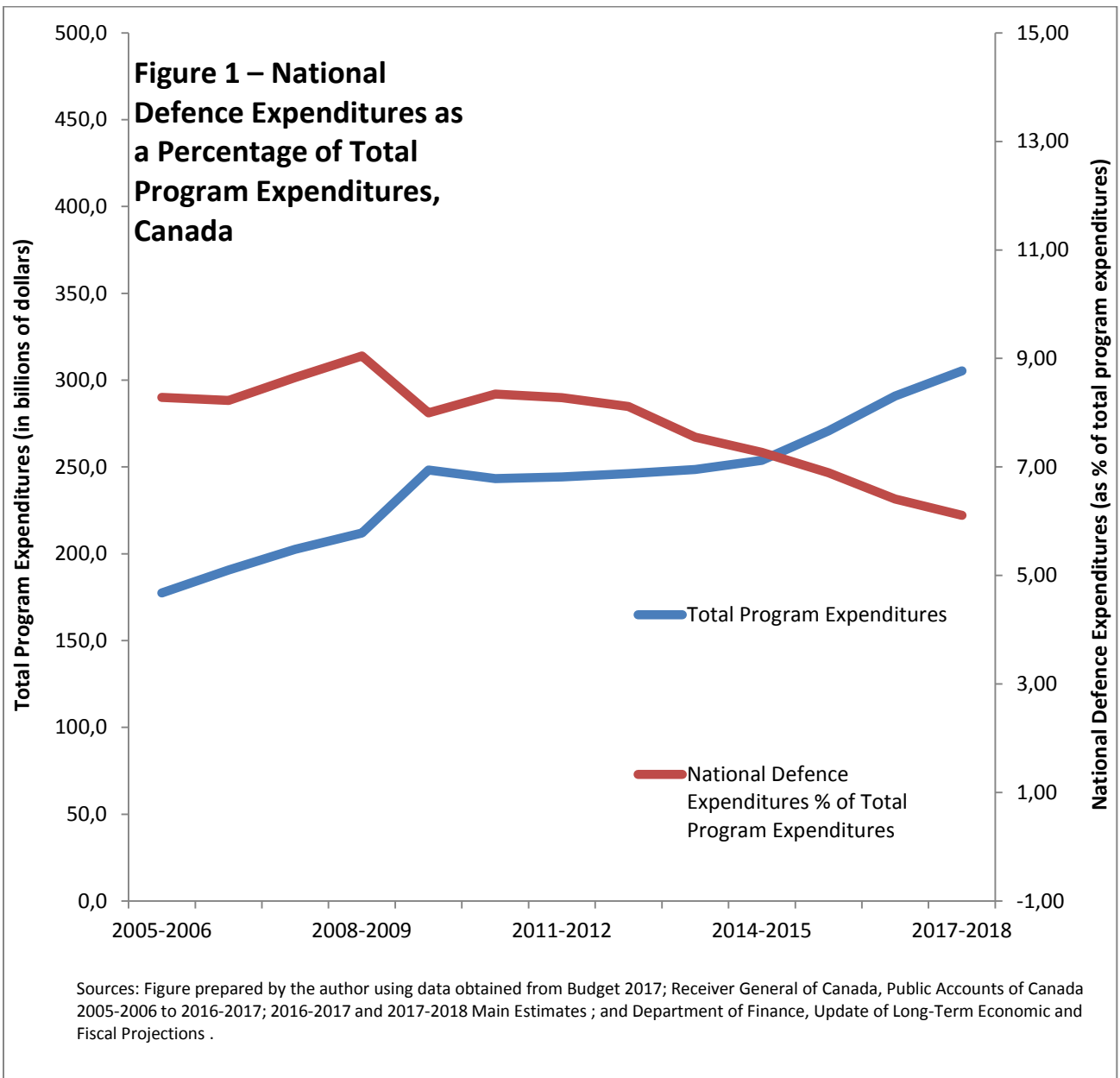


Figure 1 illustrates the reduction in defence spending as a percentage of total government.

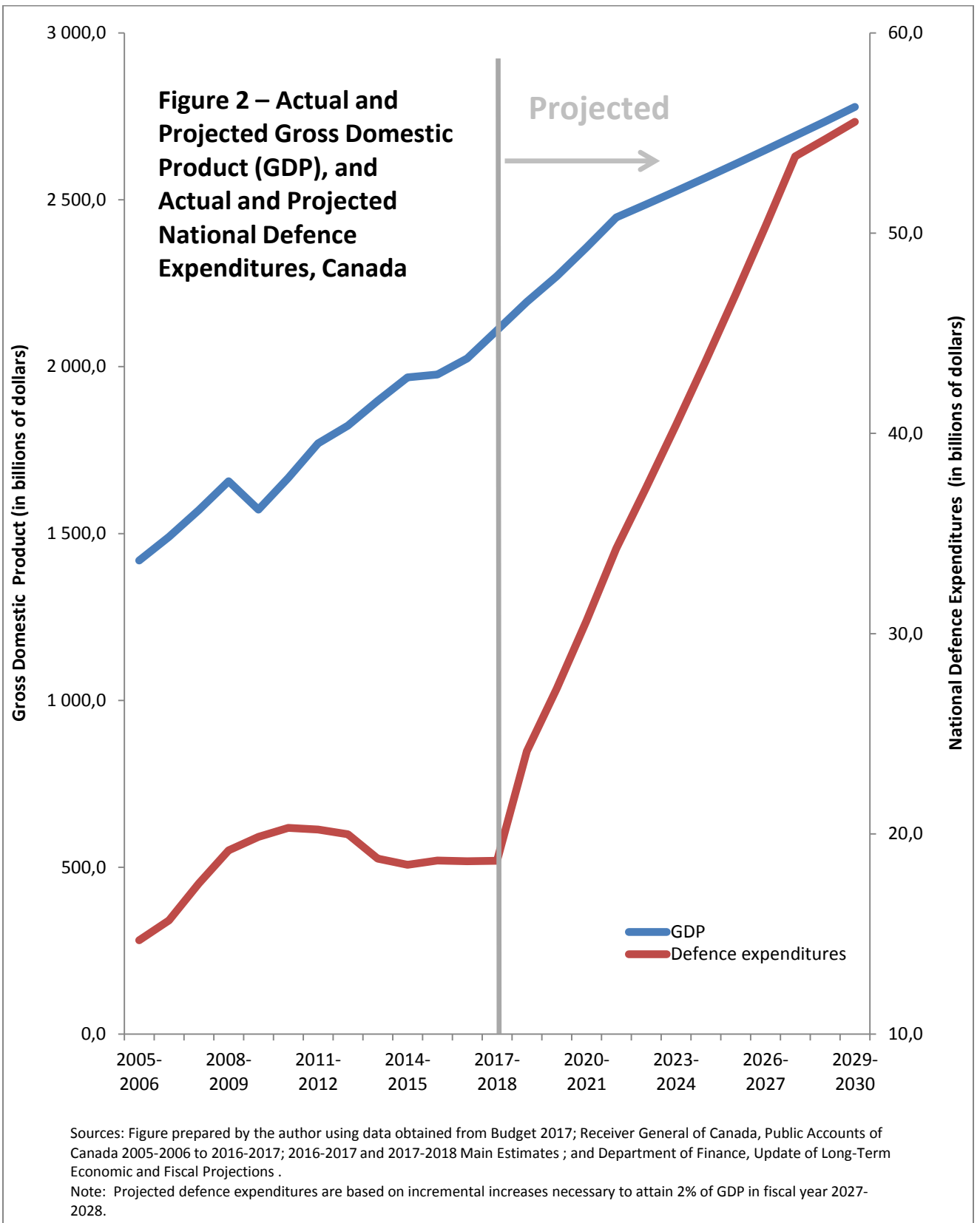


Figure 2 illustrates the proposed increase in GDP spending as proposed by the committee.

The Committee is fully aware of the challenges involved in incrementally doubling that level of funding, however, it is convinced that to effectively defend Canada, while honouring our commitment to the NATO Alliance spending must increase to 2% of GDP.

There are also significant potential benefits, first and foremost in ensuring that the Canadian Armed Forces is ready and fully capable of responding to any emergency or threat to Canada's sovereignty and second in leveraging the significant investments that will be required in support of Canada's highly capable and modern defence industries. In this respect, and under the rubric of the 2014 Defence Procurement Strategy and the reports by the Honourable David Emerson on the aerospace and space sectors, and Tom Jenkins' report, entitled: "Canada First: Leveraging Defence Procurement Through Key Industrial Capabilities" increased defence investments can pay significant dividends in terms of high-paying and technologically advanced Canadian jobs.

There is clear evidence that Canada is not spending sufficiently to ensure the defence of Canada and the protection of Canadians. The committee agrees with the Office of the Parliamentary Budget Officer and other witnesses and recommends that:

Recommendation 2:

That the Government present a budget plan to Parliament within 180 days to increase defence spending to 1.5% of GDP by 2023 and to 2% of GDP by 2028.

LAPSED FUNDING NEEDS TO END

Mr. Perry was asked to explain the implications of “lapsed funding” for the Department of National Defence’s budget.⁴⁸ As he put to the Committee in simple terms: “If equipment is not bought on schedule, the money lapses.” While accrual accounting measures introduced in the mid-2000s means that the Department is able to re-profile unspent funds at the end of a year to future years, rather than losing it entirely, this practice is not perfect. “To my mind, lapsed funding at the end of the year is bad, no matter what accounting rules or constructs are in place” he offered, suggesting high levels of lapsed funding demonstrates “that there are some structural problems with our procurement system, and if they are not addressed, the department will keep lapsing money year over year.” Mr. Perry explained:

If equipment is not bought on schedule, the money lapses. The purchasing power of those dollars is diminished because it's not fully inflated. If the money rolls forward, you get to keep it, but it's yesterday's money at tomorrow's interest rates, effectively, so you have reduced buying power. You're not moving forward to replace the equipment on the schedule you want to, so the equipment you're trying to maintain while waiting for a replacement gets older and more expensive to operate, and then you run into scheduling problems.⁴⁹

Looking ahead to future commitments, David Perry told the Committee that “the focus should be on the long-term capital equipment. During Afghanistan we saw that personnel are more oriented towards land-based operations. We need them both for all kinds of military operations. There's a need to retain technical capacity, which is hard to turn on and off quickly, but the capital investments are the ones where you continually need to be making investments over time and more significant investments over time than we have.”⁵⁰

The Defence Acquisition Guide 2016 which identifies specific defence requirements which are a priority for the military should provide the basis for clear tracking of our military’s needs and should be presented in a more readable and trackable format. Unfortunately, the information is presented in a format that is difficult for Parliamentarians and members of the public to track and ensure the government is meeting its targets.

Taking note of the important priorities identified in the Defence Acquisition Guide, and the need for a systemic, easy to follow, approach to funding their priorities, while supporting the government’s goal of increasing transparency, the committee recommends:

⁴⁸ Parliament authorizes federal organizations to spend funds through the estimates process and the associated appropriation bills. Organizations cannot exceed their appropriations and the authorization only lasts until the end of the fiscal year. Funds appropriated by Parliament that are not spent at the end of the fiscal year and are not available for use in subsequent years are said to have “lapsed.” See Alex Smith, “[The Parliamentary Financial Cycle](#),” *Library of Parliament Research Publications*, 27 January 2016.

⁴⁹ SECD, [Evidence](#), 14 November 2016, David Perry.

⁵⁰ SECD, [Evidence](#), 14 November 2016, David Perry.

Recommendation 3:

That the Government of Canada implement a long-term funding framework to secure stable and sustained investments to renew the core capabilities of the Canadian Armed Forces, while increasing transparency and accountability and eliminate the issue of lapse funding for the operational needs of the Canadian Military.

Recommendation 4:

That as funding for the defence of Canada is increased the government systematically provides funding for these identified priorities in the Defence Acquisition Guide and that it update the guide to reflect:

- 1. The specific project;**
- 2. Whether the project is funded or unfunded;**
- 3. When each project will be funded; and**
- 4. When the acquisition will be completed**

DEFENCE RENEWAL/TRANSFORMATION

Additional funding, while pivotal, is not the only solution to meeting the needs of the military. In 2013, the Department of National Defence launched a “Defence Renewal” strategy which aimed to “generate between \$750 million and \$1.2 billion annually [by 2017-18 to be] reinvested in military capabilities and readiness.”⁵¹ Building on this strategy, the current Prime Minister pledged in his election platform to:

“implement the recommendations made in the Canadian Forces’ Report on Transformation ... to build a more modern, efficient and effective military, including reducing the size of administration within government and the Canadian Armed Forces in order to strengthen front-line operations.”

Page 70, REAL CHANGE: A PLAN FOR A STRONG MIDDLE CLASS)

These objectives are important to ensuring that defence resources are effectively directed to supporting our serving men and women on the frontline.

Unfortunately, this pledge was not reflected in the mandate letter to the Minister of National Defence and Parliament has yet to be informed about how these recommendations are being implemented.

Recognizing the call from numerous witnesses for greater consensus to ensure stable funding for the military and recalling the commitment made by the current government to reduce overhead and reinvest savings into front line defence priorities, the committee recommends:

Recommendation 5:

That the Minister of National Defence report to Parliament within 180 days on progress made under the Defence Renewal/Transformation strategy, and annually thereafter.

⁵¹ Defence Renewal Annual Report - 2013-2014 - Strategic Summary

TOWARDS AN INTEGRATED DEFENCE POLICY BASED ON NATIONAL CONSENSUS

Canada's New Defence Policy Must Not Exist In A Vacuum

Today's threat environment demands agile, informed and accountable decision-making. No government, including Canada's, can afford to simply muddle along from one security event to the next. Nor can any government assume national security challenges will always arise in ways that are amenable to existing bureaucratic structures. In a turbulent and interconnected world, our national security architecture must continuously adapt so as to be fit for purpose.

A government that is unable to assess and respond quickly and appropriately to changes in the threat environment cannot be said to be serving its core purpose: defence of the nation and its interests.

Several witnesses expressed concern that the Defence Policy Review is not being created as part of a broader policy architecture. As Tony Battista, Chief Executive Officer of the Conference of Defence Associations explained, "this defence policy review is being conducted somewhat in a vacuum, without the articulation of a higher-order national security policy framework, a national security grand strategy or an international policy review process in which to nest defence policy, domestic security policy and foreign policy."⁵² The Committee is of the view that the government's approach to the Defence Policy Review represents a missed opportunity to coordinate and benefit from the collective examination of Canada's national security, development, and foreign policy strategies and objectives.

To effectively balance competing government priorities and clearly articulate strategic direction to the military, the Committee was told, national interests must drive Canada's new defence policy. Indeed, to achieve public support over the long-run, it is imperative that national interests form the core of the policy. As Mr. Battista put it, "articulating a strong, compelling national interest narrative is essential to convince Canadians and other government departments and agencies of the necessity to formulate and support a credible defence policy, and to identify the necessary funds to acquire the needed defence capabilities that will allow the CAF to accomplish its assigned missions and tasks effectively."⁵³ To do anything less, "will be fraught with challenges, will assuredly increase the capability commitment gap that has long plagued the defence planners and may well be a disservice to Canada and Canadians, thereby creating an even more serious credibility gap."⁵⁴

The Committee agrees and recommends:

Recommendation 6:

That the Government of Canada complete reviews of Canada's national security strategy and foreign policy before 2018 to ensure coordination and integration with the Defence Policy Review.

⁵² SECD, [Evidence](#), 20 June 2016. Tony Battista,

⁵³ Ibid.

⁵⁴ Ibid.

Recommendation 7:

That the Government of Canada conduct a legislatively mandated defence policy review every four years, involving broad public consultations.

Engaging Parliament

It is essential to build political consensus around the elements of a national defence policy and the military. It is also important to open up defence policy for regular review, every four years.

The Minister of National Defence is responsible for informing and educating Canadians about the role of the military and what it does to ensure security and stability while supporting Canadians when they are most in need, particularly during emergencies such as floods, ice storms, or on search and rescue missions in the high seas, the rugged wilderness or in the far north.

While some might argue that Canada's proximity to the United States makes defence spending in Canada less urgent, it falls again on the Minister to make the public case as to why we need a strong, broadly capable military. To support him, Parliamentarians and committees in the Senate and the House of Commons can be invited to engage the public, especially outside of the national capital.

Colonel (Retired) Charles Davies, whom the Committee invited to share his long experience working on materiel issues at National Defence Headquarters and NATO, offered this explanation of why a well-conceived, inclusive defence policy drafting and review process is essential:

The other four countries that I studied [the United Kingdom, France, Australia and the United States] all have robust frameworks in place for regularly reviewing and updating their defence policies. Those processes not only engage the party in government but they also engage other parties within the Parliament.

For example, in Australia, there is no national debate about whether they will or will not buy F-35s or the main priorities and the main investments that are required in their defence policy. It's similarly in France and the U.K. In the U.K.'s National Security Council, the Leader of the Opposition is frequently invited to sit at the table when they are having their meetings.

What I think is seriously lacking in Canada is a framework within the political structure for collectively developing a common view of the defence needs of the nation and a defence policy direction that can be sustained over successive governments.⁵⁵

Parliamentary committees when resourced and fully empowered are the best mechanism to hold broad and meaningful consultations on public policy issues. The Senate and the House of Commons should also be better engaged on other decisions of national importance. Certainly, all

⁵⁵ SECD, [Evidence](#), 20 June 2016, Colonel (Retired) Charles Davies.

military deployments where lives could be lost should be subject to parliamentary scrutiny and a vote. Parliament must be engaged, so the risks involved in any international deployments can be thoroughly assessed in an open, public and transparent manner.

To ensure that parliamentarians and the Canadian people are fully informed about the rationale behind Canada's participation in peace support operations, the Committee recommends that the government must table a 'Statement of Justification' in both the Senate and the House of Commons that outlines the specifics of any international deployment every time Canadian troops are involved. This statement should include the size of the mission, the goals, risks involved, rules of engagement, the costs, and details for a fixed-term withdrawal plan.

Over the lifespan of an international military deployment, Parliament, through its committees, should provide meaningful review by monitoring whether the original risk assessment remains valid or if Canada needs to reassess any aspect of its policy. In fact, to ensure government policy dovetails with public expectations, this ongoing monitoring should extend to the post-deployment – indeed, post-service – care and treatment of Canadian Armed Forces personnel. One of the first acts towards building cross-party consensus on issues related to the military would be the creation of a special joint committee on military procurement. This will enable parliamentarians to fully understand the long term needs of the military, as well as the implications, costs and benefits on major procurement projects. It will also give life to the commitment of the government in their election platform, when they pledged "We will ensure that equipment is acquired faster, with vigorous parliamentary oversight." (Real Change, page 70). The work of parliamentarians on this special committee of Parliament will ensure a less partisan, more informed debate and "oversight" on military requirements going forward.

The Committee therefore recommends:

Recommendation 8:

That the Government of Canada work with both the Senate and the House of Commons to establish a cross-party consensus on issues related to the military and veterans issues.

Recommendation 9:

That the Minister of National Defence ensure members of the three services (Army, Air Force and Navy) meet with parliamentarians at least annually, in committee and in their constituencies to further the understanding of the role of the Canadian Armed Forces and their requirements.

Recommendation 10:

That the Prime Minister regularly brief the Leader of the Official Opposition and the Leader of the third party on matters of national security and defence.

Recommendation 11:

That the Parliament of Canada establish a Special Joint Parliamentary Committee with the Senate and House of Commons to study and report on Military Procurement.

CANADA'S DEFENCE PRIORITIES

Cyber and Space: Integral to Canada's Defence and National Security

The increasingly contested or, at least, operational nature of the cyber and space domains must also be acknowledged in the Defence Policy Review. According to Brigadier-General (Retired) Jim Cox, "If you think of what we have now, we have elements who are able to engage in combat and conflict in maritime, land and air. In time, that will include space, and now there is that whole area of cyber. Based on that kind of logic, it's part of war, and it's one other area that we will have to operate on."⁵⁶ He added "I think space, if not a battle space, is an important place now because of satellites, radars and imagery and so on. Space is involved and we can't ignore it."⁵⁷

CANADIAN SPACE AGENCY

The RADARSAT Constellation Mission (RCM) includes three identical Earth observation satellites and is a paradigm shift from previous RADARSAT missions. Instead of launching a single large, multi-year operations satellite, the capabilities of the system will be distributed across several small satellites, increasing revisit, and introducing a more robust, flexible system that can be maintained at lower cost and launched into orbit using less expensive launch vehicles.

The greatly enhanced temporal revisit combined with accurate orbital control will enable advanced interferometric applications based on the satellites' four-day cycle, allowing for the generation of very accurate coherent change maps.

The RADARSAT Constellation will ensure C-band data continuity for RADARSAT users, as well as adding a new series of applications enabled through the constellation approach. The RCM is being designed for three main uses:

- Maritime surveillance (ice, surface wind, oil pollution and ship monitoring);
- Disaster management (mitigation, warning, response and recovery); and
- Ecosystem monitoring (agriculture, wetlands, forestry and coastal change monitoring).

In addition to these core user areas, there are expected to be a wide range of ad hoc uses of RADARSAT Constellation data in many different applications within the public and private sectors, both in Canada and internationally.

For example, while the mission design initially focused on maritime security requirements, land security, particularly in the Arctic, will be dramatically enhanced. The system offers up to four passes per day in Canada's far north, and several passes per day over the Northwest Passage.

The increase in revisit frequency introduces a range of applications that are based on regular collection of data and creation of composite images that highlight changes over time. Such applications are particularly useful for monitoring climate change, land use evolution, coastal change, urban subsidence and even human impacts on local environments.

Source: <http://www.asc-csa.gc.ca/eng/satellites/radarsat/>

⁵⁶ SECD, [Evidence](#), 20 June 2016, Brigadier-General (Retired) Jim Cox.

⁵⁷ Ibid.

In this connection, space assets fall outside what is currently considered national critical infrastructure. Not only is space an operational domain of increasing importance to the Canadian Armed Forces, space assets such as the Global Positioning System and Anik-series telecommunications satellites are critical to the security, safety and economic well-being of this nation as a whole.

Canadian Space Agency confirmed that the RADARSAT Constellation Mission, which will see Canada serviced by three RADARSAT earth observation satellites, will be completed by 2018.⁵⁸ However, given that the Canadian Armed Forces rely heavily on RADARSAT imagery, the government must do more to protect these important assets.

The Committee was presented with evidence that Canadian satellites represent a significant vulnerability in Canada's telecommunication infrastructure given the vital role they play in ensuring day to day communication across Canada, and in relation to search and rescue. In response to this issue, the notion of including satellites as critical infrastructure, or infrastructure that is vital to the health, safety, security and economic well-being of Canadians was raised.

Telecommunications, the internet, weather forecasting, banking, aerial monitoring all depend on satellites that Canada has either sent into space or, in the case of the United States-operated Global Positioning System constellation, depends on. Satellites also are vital for the tracking of marine traffic, and frequently play an important role in the prevention and interception of illegal activity on the Canadian coasts and at sea. The vulnerability of these systems was raised in committee with the discussion of the glitch that interrupted the Anik F2 satellite in October 2011. It is worth noting that Anik went offline due to a failed software update. In other words, satellites (and their supporting ground-based stations) can have cyber vulnerabilities. During this incident, Nunavut lost most of its telecommunications capacity.

In testimony, the Canadian Space Agency indicated that any damage to these systems could have disastrous consequences. Sylvain Laporte, President of the Canadian Space Agency, stated that "Most satellites, especially the critical infrastructures like telecommunications satellites, are useful for many countries. A desire to attack infrastructure like that would have disastrous consequences."⁵⁹ As a result, the Agency has been pushing for redundancy among satellite systems within Canada. Luc Brûlé, vice president of the Canadian Space Agency, said:

When we talk about infrastructure, in fact we are talking about bringing redundancy and resilience. Having only one satellite in some key applications is risky, so we need to bring more elements to the system. These days we see the beginning of constellations of satellites. When one fails, others can be used to replace the ones that have failed. We need to have depth in our infrastructure to be able to cover that.⁶⁰

⁵⁸ SECD, [Evidence](#), 21 November 2016, Sylvain Laporte.

⁵⁹ SECD, [Evidence](#), 21 November 2016, Sylvain Laporte.

⁶⁰ SECD, [Evidence](#), 21 November 2016, Luc Brûlé.

The Canadian Space Agency has been “promoting the idea of classifying many of our satellites as critical infrastructure.”⁶¹ This would incorporate them into the National Strategy for Critical Infrastructure and the Action Plan for Critical Infrastructure, which set out risk-based approaches for assets and systems that are deemed critical infrastructure to ensure their resiliency.

According to Brûlé, the Agency cannot independently designate satellites as critical infrastructure to ensure that they receive protection as such. Designating assets as critical infrastructure requires a policy decision that is outside the agency’s control, and should be considered on a federal level.

The Committee agrees that a new defence policy for Canada must respond to the new realities of the global operating environment and therefore recommends:

Recommendation 12:

That the Government of Canada explore opportunities to coordinate an integrated joint cyber defence strategy with the United States as well as other countries and report to Parliament on best options within 180 days.

Recommendation 13:

That the Government of Canada:

- 1. designate satellites and radar installations as critical infrastructure and**
- 2. seek ways to secure the full spectrum of all critical infrastructure assets against significant threats, including electromagnetic pulse, by 2020 in partnership with the United States and other countries and that it report to Parliament in 180 days, and annually thereafter.**

⁶¹ Ibid.

What Canada Needs To Do To Make NORAD Work: Participate in Ballistic Missile Defence

NORAD Missions

In close collaboration with homeland defense, security, and law enforcement partners, prevent air attacks against North America, safeguard the sovereign airspaces of the United States and Canada by responding to unknown, unwanted, and unauthorized air activity approaching and operating within these airspaces, and provide aerospace and maritime warning for North America.

To accomplish these critically important missions, NORAD continually adjusts its structure to meet the demands of a changing world. The commander is responsible to both the U.S. president and the Canadian prime minister. The commander maintains his headquarters at Peterson Air Force Base, Colorado. The NORAD and U.S. Northern Command (USNORTHCOM) Command Center serves as a central collection and coordination facility for a worldwide system of sensors designed to provide the commander and the leadership of Canada and the U.S. with an accurate picture of any aerospace or maritime threat. Three subordinate regional headquarters, located at Elmendorf Air Force Base, Alaska; Canadian Forces Base Winnipeg, Manitoba; and Tyndall Air Force Base, Florida, receive direction from the commander and control air operations within their respective areas of responsibility.

Source: <http://www.norad.mil/About-NORAD/>

It is the responsibility of the Government of Canada to protect Canadians from attacks from the sky. Through NORAD, we have built a strategic partnership that allows us to work together with our American allies to defend against such attacks when they involve airplanes. However, we have failed to achieve the same level of integration when it comes to an attack from a missile. The current situation is that Canada's military commanders must vacate the room at NORAD headquarters when faced with a missile attack from the sky heading towards a Canadian city or North America. The simple fact is that we are there if an aircraft is the issue but are not there when it involves a rocket. This political decision by successive governments undermines Canadian sovereignty and weakens our role in the NORAD partnership. This situation is unacceptable and was addressed by in the Committee's 2014 report on Ballistic Missile Defence.

As David Perry reminded the Committee, "Canada has no defence whatsoever against ballistic missiles."⁶² From his perspective, this represents an operational capability gap. Former Minister of National Defence, the Honourable Peter McKay described Ballistic Missile Defence as "an issue whose time has come."⁶³ Lieutenant-General (Retired) Roméo Dallaire explained that improvements in Ballistic Missile Defence technology have meant "it is now mature enough that we can engage" and argued that "we gain so much more being part of that whole program."⁶⁴

⁶² SECD, [Evidence](#), 14 November 2016, David Perry.

⁶³ SECD, [Evidence](#), 13 June 2016, the Honourable Peter MacKay.

⁶⁴ SECD, [Evidence](#), Lieutenant-General (Retired) Roméo Dallaire.

Lieutenant-General (Retired) Cuppens said “Canada has a lot to offer” when it comes to Ballistic Missile Defence and contended that “we could, for instance, participate in the detection mode. We could participate in the guidance mode or the research and development mode.”⁶⁵

As the Committee noted in its 2014 study, [Canada and Ballistic Missile Defence: Responding to the Evolving Threat](#), Canada already contributes to the “detection mode.” It does so by virtue of its 2004 agreement to permit warning information provided to the North American Aerospace Command (NORAD) to be used for Ballistic Missile Defence. However, participating in the detection of a threat is very different from participating in how to respond to such threats.

The Committee has long maintained that Canada should fully participate in the United States’ Ballistic Missile Defence program. It believes that it is in Canada’s interest to be at the table as decisions related to the strategic architecture of Ballistic Missile Defence and responses to threats are taken.

In light of an ongoing, unpredictable and provocative North Korean regime and their ballistic missile development and nuclear tests, and questions about Iran’s nuclear ambition, as well as threats from rogue actors, the Committee re-affirms its 2014 study’s recommendation that the Government of Canada enter into an agreement with the United States to participate as a partner in Ballistic Missile Defence.

Recommendation 14:

That the Government of Canada become a full partner with the United States on Ballistic Missile Defence; provide strategic locations for radar installation; and collaborate on joint research and technology partnerships.

⁶⁵ SECD, [Evidence](#), 20 September 2016, Lieutenant-General (Retired) Louis Cuppens.

“Everyone is accountable and no one is accountable”

GET ON WITH FIXING CANADA’S MILITARY PROCUREMENT

It is clear that procurement is the second biggest problem at the Department of National Defence, after the lack of funding. Today, the department is unable to procure the equipment it needs in a timely and effective manner. This is a result of the present statutory mandate and too many governments passing the buck. Unfortunately, the result has been a weak and ineffective system that lapses billions of dollars per year and fails to provide the necessary equipment to the Canadian Armed Forces on time and on budget.

Whether it is a question of deploying troops, acquiring new capital equipment, or drafting a new defence policy, sound decision making relies on a combination of meaningful risk assessment and efficient business processes. Speaking before the Committee, Dan Ross, former assistant deputy minister for materiel at the Department of National Defence, argued that unclear accountability in the Department’s matrixed procurement process actually creates risk:

The current accountability paradigm is clear: Everyone is accountable, and no one is accountable. Three central agencies and three departments share accountability but not the consequences; only DND lives with the consequences for the budget, the lives the soldiers and the delivery of effects.⁶⁶

Mr. Ross went on to explain that the Department of National Defence oversees every aspect of procurement, save contracting activities under the *Defence Production Act*. Public Services and Procurement Canada (formerly Public Works and Government Services Canada) is responsible for tendering contracts on all projects with a value over \$1 million, an amount which leaves very little flexibility for the Department to acquire equipment on an urgent basis. This is unacceptable.

Rather than being streamlined for efficiency, the current defence procurement process is managed by layers of interdepartmental committees, he said. This management overhead inevitably leads to increased risk of schedule slippage. Mr. Ross went on to say:

The consequences of slippage are felt by DND in operational obsolescence or just real gaps in capability, unnecessary maintenance costs, deflated buying power — for service combatants, it’s \$1 million a day — and an increase in cost, technology and political risks.⁶⁷

Fix Internal Processes

Mr. Perry, reinforced Dan Ross’s critique of the current defence procurement process but added that the Department of National Defence’s internal project management processes also leave a lot to be desired. According to Mr. Perry, an effort of the Vice Chief of Defence Staff launched in

⁶⁶ SECD, [Evidence](#), 20 June 2016, Dan Ross.

⁶⁷ Ibid.

2012 to clear away the red tape around internal project approvals has still not borne fruit five years later.

Mr. Perry situated the Department's procurement process within the government-wide changes to project approval introduced in 2009, as part of the *Federal Accountability Act*. He described an attempt to use a more sophisticated approach to risk management that has resulted in unintended and undesirable outcomes, stating that:

Now [procurement projects] have to go through an assessment process which is fairly time-intensive to assess the risk and complexity along with it. The benefit of doing that is that if it's a low-risk project, then the minister can approve it, and that process is shorter than going through the Treasury Board, but the down side is that doing that assessment each time for each project when the department has close to a thousand projects in total is very laborious and resource-intensive.⁶⁸

These delays, combined with internal red tape and the Department of National Defence's difficulties in producing a realistically costed, long-term acquisition plan, have resulted in a procurement process that is in disarray, he said.

Too Many Players

The previous Government responded to these problems by creating a ministerial working group which engaged ministers from all key departments (Defence, Public Works, Industry, Fisheries and Oceans and Treasury Board) together with officials from these departments and representatives from firms working on key procurement projects in order to set clear project milestones, resolve problems and disagreements and meet approval timelines. The ministerial working group played an important role in resolving challenges related to both the maritime helicopter project and the National Shipbuilding Procurement Strategy.

The new Government has introduced a different process to manage major procurements, led by a new Cabinet Committee on Defence Procurement. However, this Committee is concerned that the new process, involving a myriad of Government Departments (National Defence; Innovation, Science and Economic Development; Public Services and Procurement; Transport; and Treasury Board) and chaired by the Minister of Natural Resources will be very challenged in moving current projects forward expeditiously, let alone managing the many major procurements that will be required in the decade ahead.

There are simply too many players involved in the current procurement process with too little focus on advancing major procurements on time and on budget as evidenced by the delay in moving the coast guard and naval procurement in the non-combat component of the National Shipbuilding Strategy forward.

⁶⁸ SECD, [Evidence](#), 14 November 2016, David Perry.

Witnesses suggested that Canada look to Australia, where a bi-partisan defence procurement body whose costings are independently verified has been able to produce a 20-year defence acquisition plan. This acquisition plan, would set out specific projects, each with narrow costing bands and sequenced out over time.

In Australia the Capability Acquisition and Sustainment Group (CASG)⁶⁹ has been established to undertake one-stop military equipment procurement and meet the supply requirements of the Australian Defence Forces. The Group operates within the Australian Department of Defence. CASG is charged with acting as the key delivery agency for defence capability, and also with improving strategic level partnerships with industry. The aim is to establish a “core group” of skilled public servants within CASG to manage a ‘smart buyer’ function within Government, allowing Defence to focus on the planning and governance of procurement projects while industry focuses on execution.

As Colonel (Retired) Davies pointed out, “we must get the broad thrust of our defence policy right so that it is reasonably stable over 5, 10, 15, 20 or 25 years so that we are not making bad investment decisions or making good investment decisions that someone else wants to criticize and then undo down the road.”⁷⁰

Dan Ross suggested that some inefficiencies surrounding Canada’s procurement strategy stem from its bureaucratic governance structure. He pointed to examples of what he called “excessive over-management and the redundant layers of involvement that go on every day.”⁷¹

Tony Battista proposed that cumbersome bureaucratic processes and the negative implications of partisan policies could be addressed by creating a non-partisan office capable of “transcend[ing] any political colour with regard to defence planning so that we can focus on capabilities and the aspirations of the nation.”⁷²

In David Perry’s assessment, significant funding cuts for national procurement since 2010 have created a readiness gap. National procurement is the budget line that “funds equipment maintenance, repair, overhaul and spare parts.”⁷³ These reductions “saw declines in the national procurement budgets for some air fleets drop by as much as 25 per cent and contributed to the army parking half of its “B” vehicle fleet.”⁷⁴ Due to a lack of funding during this period, the military continues to deal with significant maintenance, repair and overhaul issues.

The Committee heard from several witnesses that “making up” for years of inadequate spending is a common theme across the procurement system. As Mr. Perry describes it: “we keep pushing back procurements that the money was allocated for several years prior. The need to make those

⁶⁹ <http://www.defence.gov.au/dmo/aboutcasg/>

⁷⁰ SECD, [Evidence](#), 20 June 2016, Colonel (Retired) Charles Davies.

⁷¹ SECD, [Evidence](#), 20 June 2016, Dan Ross.

⁷² SECD, [Evidence](#), 20 June 2016, Tony Battista.

⁷³ SECD, [Evidence](#), 14 November 2016, David Perry.

⁷⁴ Ibid.

actual acquisitions doesn't go away, but you keep acquiring the need to make new ones on their original schedules if they don't actually slip and fall behind.”⁷⁵

Long-term planning, met with adequate financial resources and the human capacity within the government to execute the procurement system are essential to moving forward on defence procurement, witnesses argued.

To support current and ongoing procurement projects and to ensure timelines are met and reasonable costs are maintained, the Committee recommends:

Recommendation 15:

That the Minister of National Defence appoint a lead negotiator and interlocutor for each procurement project valued over \$1 billion dollars and assign responsibility and accountability.

It is clear to most Canadians that the current procurement structure is not working well.

Significant reform is required so that the Government of Canada can be positioned to deliver on Canada's many defence obligations. In particular, the Committee believes that it is essential to ensure that the process has the necessary personnel and financial resources that are needed to clear backlogs and meet project milestones. The Committee recommends:

Recommendation 16:

That the Government :

- 1. Mandate that the Minister of National Defence acquire and deliver the right equipment to the Canadian Armed Forces in a timely manner; leverage purchases of defence equipment to create jobs and economic growth; and, streamline defence procurement approval processes;**
- 2. Transfer responsibilities for all defence and Coast Guard procurement from Public Services and Procurement Canada to the Department of National Defence;**
- 3. Establish a major military procurement agency within the Department of National Defence; and**
- 4. Take the steps, on an interim basis, to ensure that current major procurement projects proceed expeditiously and responsibly, both by**
 - a) contracting procurement experts while training, deploying and developing a plan**
 - a. to retain in-house staff; and**
 - b) by ensuring direct ministerial oversight of all major procurements to ensure that they advance on time and on budget.**

⁷⁵ Ibid.

APPENDIX A

TABLE 1: Status Update on Key Commitments of the *Canada First Defence Strategy*

CFDS Commitments (2008)	Status Update (2017)
<p>Increase the number of Canadian Armed Forces personnel to 100,000 (70,000 Regular Forces and 30,000 Primary Reserve Forces).</p>	<p>In recent years, the federal government has reduced the authorized target strength of the Canadian Armed Forces, which currently stands at 68,000 Regular Force and 27,000 Primary Reserve Forces members.⁷⁶</p>
<p>In addition to the acquisition of four C-17 Globemaster strategic lift aircraft already in service, the Government is procuring 17 new C-130J Hercules tactical lift aircraft and has announced plans to acquire 16 CH-47F Chinook helicopters, three replenishment ships, 2,300 trucks, up to 100 Leopard 2 tanks and 6–8 Arctic/Offshore Patrol Ships.”⁷⁷</p>	<p>The federal government has purchased a fifth C-17 strategic transport aircraft in 2015. All five C-17s have been delivered to the RCAF.</p> <p>All 17 C-130J Super Hercules tactical transport aircraft have been delivered to the RCAF.</p> <p>The federal government has reduced the number of CH-47F Chinook medium-to-heavy lift helicopters to be acquired from 16 to 15. All 15 Chinooks have been delivered to the RCAF.</p> <p>The federal government originally planned to acquire three Joint Support Ships to replace the RCN’s two old oil replenishment ships. However, the federal government cancelled that project in 2008 and launched a revised Joint Support Ships project in 2010, which called for the purchase of two (instead of three) Joint Support Ships (with an option to procure a third, if additional funding becomes available). The two ships are expected to be delivered to the RCN between 2020 and 2021.</p> <p>Pending the completion of the two Joint Support Ships, an interim support ship capability is being acquired through a contract with Federal Fleet Services Inc. The contract involves the conversion of a commercial vessel into an Auxiliary Oiler Replenishment (AOR) ship and is anticipated to be delivered to the RCN in 2017-2018.</p> <p>The federal government has since reduced the number of Arctic/Offshore Patrol Ship to be purchased for the RCN to six ships. Construction of the first Arctic/Offshore Patrol Ship began in 2015. All six ships are expected to be delivered to the RCN between 2018 and 2023.</p> <p>The Medium Support Vehicle System (MSVS) project called for the acquisition of 2,300 new medium-sized logistics trucks and associated equipment for the Canadian Army. This was to include up to 1,500 Standard Military Pattern (SMP) trucks and up to 800 Militarized Commercial Off-the-Shelf (MILCOTS) trucks. However, in 2009, the federal government announced that the number of MILCOTS trucks to be purchased would be increased to 1,300, raising the</p>

⁷⁶ DND, [Report on Plans and Priorities 2016–2017](#), p. 20.

⁷⁷ DND, [Canada First Defence Strategy](#), p. 4.

CFDS Commitments (2008)	Status Update (2017)
	<p>total number of trucks to be acquired under the MSVS project to 2,800. All MILCOTS trucks have been delivered to the Canadian Army. The SMP truck contract has been awarded in July 2015. SMP truck deliveries are expected to begin in mid-2017.</p> <p>Under Phase 1 of the Tank Replacement Project (TRP), 100 surplus Leopard 2 tanks were purchased from the Netherlands government. Phase 2 of the TRP consists of repairing, overhauling and upgrading 82 of those vehicles as Main Battle Tanks (MBT) and converting 8 as Armoured Recovery Vehicles (ARV). The remaining 10 vehicles have been provided to the Force Mobility Enhancement (FME) project for conversion into additional ARVs and Armoured Engineering Vehicles (AEV) (see FME section below). To date, all 82 MBTs and 8 ARVs have been delivered to the Canadian Army.⁷⁸</p>
15 warships to replace existing destroyers and frigates starting in 2015.	Construction of the 15 Canadian Surface Combatants has not yet begun. In October 2016, the federal government announced the release of the Request for Proposal (RFP) for the design of the Canadian Surface Combatants. The ship design is expected to be selected by the summer of 2017. Public Services and Procurement Canada (PSPC) expects construction of the first Canadian Surface Combatants to begin in the early 2020s. ⁷⁹ The 15 warships are expected to be delivered to the RCN between the late 2020s and the mid-2040s. ⁸⁰
10 to 12 maritime patrol aircraft to replace the RCAF's fleet of CP-140 Aurora patrol aircraft starting in 2020.	No replacement for the CP-140 Aurora has yet been announced. However, in 2014, the federal government announced its intent to increase the RCAF feet of modernized CP-140 Aurora from 10 to 14 and to extend the service life of those aircraft to 2030. ⁸¹ The RCAF still hopes to replace the CP-140 Aurora with a new Canadian Multi-Mission Aircraft (CMA) in the coming years. According to the Department of National Defence, the CMA contract is expected to be awarded in 2025 with final delivery of the new aircraft between 2026 and 2036. The exact number of CMA aircraft to be purchased is not yet known. ⁸²
17 Fixed-Wing Search and Rescue Aircraft (FWSAR) starting in 2015.	No FWSAR aircraft have yet been delivered to the RCAF. In December 2016, the federal government announced the selection of the Airbus C-295 as the RCAF's new FWSAR

⁷⁸ DND, "[Status Report on Transformational and Major Crown Projects](#)," *Report on Plans and Priorities 2016–2017*.

⁷⁹ DND, "[Competitive Process Launched to Select Design of Canadian Surface Combatant](#)," 27 October 2016.

⁸⁰ DND, "[Status Report on Transformational and Major Crown Projects](#)," *Report on Plans and Priorities 2016–2017*.

⁸¹ Ibid.

⁸² DND, "[Aerospace Systems](#)," *Defence Acquisition Guide 2016*.

CFDS Commitments (2008)	Status Update (2017)
	aircraft. The contract calls for the procurement of 16 C-295. The aircraft are expected to be delivered to the RCAF between 2019 and 2022. ⁸³
65 Next-Generation Fighter aircraft to replace the CF-18 jet fighters starting in 2017.	<p>In 2010, the federal government announced its intent to acquire 65 Lockheed Martin F-35 Lightning II stealth jet fighters to replace the CF-18s in the coming years.⁸⁴</p> <p>However, reports released by the Parliamentary Budget Officer (PBO) and the Auditor General of Canada (AG) in March 2011 and April 2012 respectively, identified problems with the procurement process and projected costs of acquiring the 65 F-35s.⁸⁵ The federal government responded in 2012 by hiring KPMG to conduct an independent audit of the F-35 project. When KPMG reported later in 2012 that the costs of the F-35 project were even higher than those that had been revealed in the PBO and AG reports, the federal government put the acquisition process on hold until other jet fighter options could be studied. The evaluation of other jet fighter options (the Boeing F-18 Super Hornet; Dassault Rafale; Eurofighter Typhoon and Lockheed Martin F-35) was completed in December 2014.⁸⁶ However, no decision pertaining to the replacement of the CF-18 had yet been made by the federal election of October 2015.</p> <p>In November 2016, the federal government announced that it was “taking the necessary steps to prepare for an open and transparent competition for the permanent replacement of Canada’s CF-18 fighter aircraft” and that, in the interim, it “will initiate discussion with the U.S. Government and Boeing on a potential procurement of, and in-service support for, 18 [F-18] Super Hornet aircraft for use over an interim period to supplement the current fleet [of CF-18s] until the transition to a permanent replacement.”⁸⁷ According to recent media reports, the federal government expects the first F-18 Super Hornet aircraft to be delivered to the RCAF in 2019.⁸⁸</p>

⁸³ DND, [“Canadian Armed Forces to Receive New Search and Rescue Aircraft,”](#) 8 December 2016.

⁸⁴ DND, “Canada’s Next Generation Fighter Capability – The Joint Strike Fighter F-35 Lightning II,” 16 July 2010; DND, “Next Generation Fighter Announcement,” 16 July 2010.

⁸⁵ Office of the Parliamentary Budget Officer, [An Estimate of the Fiscal Impact of Canada’s Proposed Acquisition of the F-35 Lightning II Joint Strike Fighter](#), Ottawa, 10 March 2011; and Office of the Auditor General of Canada, [“Chapter 2: Replacing Canada’s Fighter Jets,” Report of the Auditor General of Canada to the House of Commons](#), Spring 2012.

⁸⁶ David Pugliese, [“Canada and the F-35 – The Ups and Downs of a Controversial Fighter Jet Purchase,” Ottawa Citizen](#), 22 September 2015.

⁸⁷ DND, [“The Procurement Process Defined: Replacing Canada’s CF-18 Fleet,”](#) 22 November 2016.

⁸⁸ Murray Brewster, [“Stopgap Super Hornet Purchase Could Have \\$5B to \\$7B Price Tag,” CBC News](#), 31 January 2017.

CFDS Commitments (2008)	Status Update (2017)
	<p>In the meantime, in 2014, the federal government announced new life-extension upgrades that would keep the RCAF's fleet of 76 CF-18s flying up to 2025 (instead of 2020).⁸⁹</p> <p>This life-extension work is expected to be done in the coming years through the CF-188 Life Extension 2025 project. The Department of National Defence expects a Request for Proposal (RFP) to be released to industry in 2017 and a contract awarded in 2018.⁹⁰</p>
Acquisition of a new family of land combat vehicles and systems.	<p>In 2009, the federal government launched the Family of Land Combat Vehicles (FLCV) project, which called for the upgrade of the Canadian Army's fleet of LAV III armoured vehicles and the acquisition of three new fleets of land combat vehicles: Close Combat Vehicles (CCV), Tactical Armoured Patrol Vehicles (TAPV) and Force Mobility Enhancement Vehicles (FME).</p> <p>The LAV III upgrade project called for the upgrade of 550 LAV III vehicles. The first upgraded vehicle was delivered to the Canadian Army in 2012. According to the Department of National Defence, more than 300 vehicles had been upgraded up to April 2016. All remaining vehicles are expected to be upgraded and delivered by 2019.⁹¹</p> <p>The CCV project called for the procurement of 108 vehicles (with options for an additional 30). The project was cancelled in 2013.⁹² partly due to the improved capabilities of the upgraded LAV IIIs"</p> <p>The TAPV project called for the acquisition of 500 vehicles (with options for an additional 100). TAPV deliveries began in August 2016. All vehicles are expected to be delivered to the Canadian Army by 2017.⁹³</p> <p>The FME project called for the acquisition of 18 Armoured Engineer Vehicles (AEV) and 4 Armoured Recovery Vehicles (ARV). The first AEV was delivered in 2015. As of April 2016, 3 AEVs and 3 ARVs had been delivered to the Canadian Army. The last vehicle is expected to be delivered in 2017.⁹⁴</p>

⁸⁹ Steven Chase, "[Canada to Funnel Money into Upgrades to Keep CF-18 Fighter Jets Flying](#)," *The Globe and Mail*, 30 September 2014. It should be noted that the CF-18 fleet consisted of 77 aircraft in 2014. However, that number was reduced to 76 when a CF-18 crashed in Cold Lake, Alberta, on 28 November 2016. DND, "[4 Wing Cold Lake CF-188 Hornet Crash](#)," 28 November 2016.

⁹⁰ DND, "[Aerospace Systems](#)," *Defence Acquisition Guide 2016*.

⁹¹ DND, "[Status Report on Transformational and Major Crown Projects](#)," *Report on Plans and Priorities 2016–2017*.

⁹² DND, "[Government of Canada Will Not Proceed with the Close Combat Vehicle Procurement](#)," 20 December 2013.

⁹³ DND, "[Status Report on Transformational and Major Crown Projects](#)," *Report on Plans and Priorities 2016–2017*; DND, "[Tactical Armoured Patrol Vehicle](#)."

⁹⁴ DND, "[Status Report on Transformational and Major Crown Projects](#)," *Report on Plans and Priorities 2016–2017*.

CFDS Commitments (2008)	Status Update (2017)
Improve and modernize infrastructure.	<p>Since 2008, numerous defence infrastructure projects have been launched to modernize and renew the Department of National Defence and Canadian Armed Forces infrastructure across Canada. For a complete listing of the various infrastructure projects announced between 2009 and 2017, see the Department's "Infrastructure Projects" website.⁹⁵</p>

⁹⁵ DND, ["Infrastructure Projects."](#)

APPENDIX B

Defence Acquisition Guide 2016

New Initiatives

1. [CC-115 Buffalo Primary Air Vehicle Repair and Overhaul;](#)
2. [CC-138 Twin Otter Primary Air Vehicle Repair and Overhaul;](#)
3. [Leopard 2 Family of Vehicles In-Service Support Contracts;](#)
4. [Sleeping Bag System Contract;](#)
5. [Armoured Heavy Support Vehicles System Sustainment;](#)
6. [Light Utility Vehicle Wheeled Sustainment;](#)
7. [Mine Resistant Ambush Protected Buffalo and Cougar Vehicle Sustainment;](#)
8. [Non-Combatant Classification Society - Classification Society Support to DND's Non-Combatant Fleet;](#)
9. [Halifax-Class Shipyard Contract-East;](#)
10. [Halifax-Class Shipyard Contract-West;](#)
11. [Light Armoured Vehicle III Upgrade Part 2;](#)
12. [Light Force Enhancement;](#)
13. [Modular Pack System;](#)
14. [Pistol Replacement;](#)
15. [Future Family of Unmanned Ground Vehicles;](#)
16. [Fighter Lead-in Training;](#)
17. [Naval Reserve Boat – Training;](#)
18. [Containerized Systems;](#)
19. [Individual Protective Ensemble;](#)
20. [Sensitive Equipment Decontamination System;](#)
21. [Chemical Biological Radiological Nuclear Information Management;](#)
22. [Combined Chemical Biological Detection Identification and Monitoring;](#)
23. [Chemical, Biological, Radiological and Nuclear Aerial Reconnaissance;](#)
24. [Armament Loader Modernization;](#)
25. [Royal Canadian Air Force Footwear Project;](#)
26. [CC144 Consolidation Project;](#)
27. [Remote Mine-hunting and Disposal System;](#)
28. [Five-Eyes Collaborative Environmentality;](#)
29. [Extreme Pressure Detonics Chamber;](#)
30. [Rocket and Missile Systems Modeling & Simulation;](#)
31. [Force Anti-Submarine Warfare;](#)
32. [Modular Biological Containment Facility;](#)
33. [Electro-Optic/Infrared Warfare;](#)
34. [Space-based Maritime Domain Awareness;](#)
35. [Over the Horizon Radar;](#)
36. [Canadian Arctic Underwater Sentinel Experimentation;](#)
37. [Tasking, Collection, Processing, Exploitation, and Dissemination; and](#)
38. [Large Scale Acoustic Resonance Mixer.](#)

Defence Acquisition Guide 2016

Not included

1. [Fixed-Wing Search and Rescue Aircraft Replacement](#);
2. [Arctic and Offshore Patrol Ship](#);
3. [Naval Remote Weapon Station](#);
4. [Maritime Satellite Communications Upgrade](#);
5. [Enhanced High Readiness](#);
6. [84mm Ammunition](#);
7. [1 CFFTS Tactical Mission Training System Replacement](#);
8. [Maritime Next Generation Communications Suite](#);
9. [CF-188 Defensive Electronic Warfare Suite](#);
10. [CF-188 Follow-on Operation Flight Program](#);
11. [Royal Canadian Air Force Aerial Fire Fighting Vehicle](#);
12. [Aerodrome Support Equipment](#);
13. [On-Scene Control Emergency Response Modernization](#);
14. [Tactical Observer Fire Control System Upgrade](#);
15. [Common Remote Weapon System](#);
16. [LAV OPV Crew Commander Independent Viewer](#);
17. [RDX Replacement](#);
18. [Demolition Modernization Project](#);
19. [Victoria Class AN/BQQ-10 Sonar Follow-On Technical Support In-Service Support Contract](#);
20. [North Warning System Operations and Maintenance Contract](#);
21. [Fragmentation Vest Contract](#);
22. [Contracted Airborne Training Services](#);
23. [Victoria Class Submarine Fire Control System In-Service Support Contract](#);
24. [Virtual Integrated Shipboard Information Networks](#);
25. [Polar Communications and Weather](#);
26. [Canadian Forces Health Information System](#);
27. [Enhanced Information Technology Infrastructure](#);
28. [Secure Configuration Management](#);
29. [Royal Canadian Air Force Simulation Implementation Project](#);
30. [Improved Trail Snowshoe](#);
31. [Sea King T58 Engine Contract](#);
32. [SONOBUOYs AN/SSQ 62E DICASS Contract](#);
33. [Signature Collection and Management Equipment](#);
34. [Professional Support for Tactical Edge Cyber Command and Control](#);
35. [Test, Analysis and Development Services in the Field of Injury, Biokinetics, Small Arms; and Effects and Personal Protection](#);
36. [Ocean-going research capability](#); and
37. [Simulators and Trainers Maintenance Support Contract](#).

APPENDIX C – LIST OF WITNESSES

Monday, May 30, 2016

Global Affairs Canada
United Nations Department of Peacekeeping Operations

The Honourable Harjit Singh Sajjan, P.C., M.P., Minister of National Defence
Mark Gwozdecky, Assistant Deputy Minister, International Security and Political Affairs
Hervé Ladsous, Head of Department

Monday, June 13, 2016

The Honourable Peter MacKay, P.C., former Minister of National Defence
The Honourable David Pratt, P.C., former Minister of National Defence

Monday, June 20, 2016

Canadian Defence and Foreign Affairs Institute
As an individual
Embassy of Sweden to Canada

Colin Robertson, Vice-President, and Fellow, School of Public Policy, University of Calgary
Elinor Sloan, Professor of International Relations, Department of Political Science, Carleton University
H.E. Per Sjögren, Ambassador

Conference of Defence Associations Institute

Major General (Retired) Daniel Gosselin, Chair of the Board

As individuals

Colonel (Retired) Charles Davies
Colonel (Retired) Michael P. Cessford

Conference of Defence Associations

Tony Battista, CEO

As an individual

Brigadier-General (Retired) Jim Cox

Conference of Defence Associations

Vice-Admiral (Retired) Denis Rouleau, Chair

As individuals

Dan Ross, Former Assistant Deputy Minister (Materiel), National Defence
Major-General (Retired) James R. Ferron, Vice-President, Capability Development, Carillon Canada Inc.
Vice-Admiral (Retired) Glenn Davidson, Former Ambassador of Canada to Syria and Afghanistan

Monday, September 19, 2016

As individuals

Jane Boulden, Associate Dean of Arts, Royal Military College of Canada (by video conference)
Walter Dorn, Professor and Chair, Master of Defence Studies Programme, Royal Military College of Canada and Canadian Forces College

Lieutenant-General (Retired) D. Michael Day, Fellow,
Canadian Global Affairs Institute
Lieutenant-General (Retired) Charles Bouchard

Lieutenant-General (Retired) the Honourable Roméo Dallaire

Lieutenant-Colonel (Retired) David Last, Associate
Professor, Royal Military College
David Bercuson, Director, Centre for Military, Security and
Strategic Studies, University of Calgary (by video
conference)

*Naval Association of Canada
As an individual*

Vice-Admiral (Retired) Drew Robertson
James A. Boutilier, Adjunct Professor, Pacific Studies,
University of Victoria

Navy League of Canada

Navy Captain (Retired) Harry Harsch, Vice President,
Maritime Affairs

Tuesday, September 20, 2016

*Office of the Auditor General of
Canada*

Michael Ferguson, Auditor General of Canada

*Office of the Ombudsman for the
Department of National Defence
and the Canadian Forces*

Gordon Stock, Principal
Gary Walbourne, Ombudsman

*The African Centre for the
Constructive Resolution of
Disputes (ACCORD)*

Kwezi Mngqibisa, Coordinator and Consultant, Somalia
Initiative (by video conference)

As an individual

Royal Canadian Legion

Major General (Retired) Lewis Mackenzie
Major General (Retired) Richard Blanchette, Chairman,
Defence and Security Committee
Charls Gendron, Secretary, Defence and Security Committee
Major (Retired) Wayne Mac Culloch, National President

*Canadian Association of Veterans
in United Nations Peacekeeping
Canadian Peacekeeping Veterans
Association*

Lieutenant General (Retired) Louis Cuppens, Special Advisor

*Royal Norwegian Embassy in
Ottawa*

Her Excellency Anne Kari Hansen Ovind, Ambassador of the
Kingdom of Norway

As an individual

Carolyn McAskie, Former Special Representative of the
Secretary General (SRSG) and Head of the United
Nations Peacekeeping Mission in Burundi (ONUB)

Wednesday, September 21, 2016

*National Defence and the
Canadian Armed Forces*

Major-General Jean-Marc Lanthier, Commander, Canadian
Army Doctrine and Training Centre

*Parliamentary Centre
CANADEM*

Lieutenant-Colonel Brian Healey, Commander, Peace
Support Training Centre

National Defence and the

Petra Andersson-Charest, Director of Programs

Paul LaRose-Edwards, Executive Director

General Jonathan Vance, Chief of the Defence Staff

Canadian Armed Forces

*National Defence and the
Canadian Armed Forces
Reserves 2000
Institut militaire de Québec*

Lieutenant-General Christine Whitecross, Commander,
Military Personnel Command
Commodore Brian Santarpia, Director General, Plans,
Strategic Joint Staff
Lieutenant-Colonel (Retired) John Selkirk, Executive Director
Brigadier General (Retired) Richard Giguère, President (by
video conference)

Monday, November 14, 2016

*As an individual
Air Force Association of Canada*

David Perry, Senior Analyst, Canadian Global Affairs Institute
Lieutenant-General (Retired) André Deschamps, Honorary
National President

Monday, November 21, 2016

*National Defence and the
Canadian Armed Forces*

Major-General Paul Bury, Chief Reserves

Brigadier-General Rob Roy MacKenzie, Chief of Staff, Army
Reserve

Monday, November 28, 2016

*National Defence and the
Canadian Armed Forces*

Lieutenant-General Michael Hood, Commander, Royal
Canadian Air Force
Brigadier-General Michel Lalumiere, Director General, Air
Force Development
Major-General Christian Juneau, Deputy Commander,
Canadian Army
Brigadier-General Rob Roy MacKenzie, Chief of Staff, Army
Reserve

Public Safety Canada

Lori MacDonald, Assistant Deputy Minister, Emergency
Management and Programs Branch
Stéphanie Durand, Director General, Policy and Outreach
Major-General William Seymour, Chief of Staff, Operations,
Canadian Joint Operations Command

*National Defence and the
Canadian Armed Forces*

Brigadier-General Michel Lalumiere, Director General, Air
Force Development

Canadian Coast Guard

Mario Pelletier, Deputy Commissioner, Operations

Monday, December 12, 2016

*Office of the Parliamentary Budget
Officer*

Jean-Denis Fréchette, Parliamentary Budget Officer

Mostafa Askari, Assistant Parliamentary Budget Officer
Jason Jacques, Director, Economic and Fiscal Analysis
Peter Weltman, Senior Director, Costing and Program
Analysis

*National Defence and the
Canadian Armed Forces*

Brigadier-General Michael Nixon, Commander, Joint Task
Force North (by video conference)

Lieutenant-Colonel Luis Carvallo, Commanding Officer, 1st
Canadian Ranger Patrol Group (by video conference)