July, 2016

BACKGROUND

Canada's Defence "Policy" has been remarkably consistent - through both changes in government and the six previous Defence Reviews (1964, 1971, 1987, 1994, 2005, and 2008). In short, there are four consistent underlying policy themes – Defence of Canada, Defence of North America, Coalition Defence (NATO), and support to the UN. Indeed, the Prime Minister's 2016 mandate letter to MND confirms these responsibilities.

However, the international security environment has changed markedly over the last 52 years of apparent consistency in themes, and has become much more dangerous in the past ten years. The Cold War ended in 1989 and with it "classical" peacekeeping. But it also came with a Government expectation of a "peace dividend".

Although defence spending was cut dramatically during the 90s, this was also a period of rising regional conflict in the former Yugoslavia and the Middle East – especially in Iraq - leading up to the terrorist attack on the United States on 11 September 2001. The Afghanistan intervention led to 14 years of Canadian military participation in a NATO operation resulting in over 2,300 casualties, 161 of them fatal.

Deployed operations continued to the Libyan campaign and now to Operation Impact – the Canadian contribution to the Global Coalition to defeat ISIL.

While underlying international conditions have evolved over the years, these policy themes have stood the test of time, and the CAF, although seriously stressed in certain capacity areas, have generally had the capabilities to successfully carry out assigned missions and make effective contributions to our coalition partners.

But these capabilities are at risk - unsustainable without significant financial and structural changes. The global security environment is now more volatile, uncertain, complex and ambiguous. Globalized external threats are now capable of disrupting, and even destroying, communications integrity, financial operations, land, sea, and air transportation, and critical infrastructure - on Canadian soil and on our deployed forces.

What Canada needs now is a fresh look at our long-established defence policy themes and the CAF capabilities that we will need to maintain whatever emerges from that fresh look.

ISSUES AND RECOMMENDATIONS

Strategic Intelligence

The global security environment is increasingly complex, interconnected and dangerous - and increasingly disconnected from the post-Cold War global threat perceptions that influence Canada's defence policies. The systemic interconnections in a globalized environment represent challenges requiring insight, foresight and understanding and assessment of downstream effects on Canada's interests.

The unexpected BREXIT result and the potential for continuing and widespread repercussions at a time of perceived security challenges in Europe is an excellent example of the sudden effects of unexpected events. This event alone reinforces the need for a committed capability for NATO to be ready to address regional security issues in Europe with a resurgent Russia, at the same time as an expansionist China places demands for attention in the Pacific domain.

The implementation of the fundamentals to address the situation must start with a

comprehensive strategic intelligence capacity that will provide an intelligence situation report – a strategic assessment that should form the framework for all government department policies. (The June 2016 release by CSIS of "2018 Security Outlook" is an example of such a document but does not carry the imprimatur of either CSIS or the Government of Canada as a reference document for a whole-of-government approach to a national security policy).

This is done in allied nations – the U.S., U.K., France, and Australia - with offices akin to the Australia Office of National Assessment. Unclassified versions should also inform the Government leadership and all MPs, - and can be communicated broadly across the electorate. A classified version should be able to be reviewed by the Commons and Senate Defence Committees - members eligible with a security clearance, perhaps even Privy Council membership - to ensure that there is a broad understanding of the security issues and that defence and security policies become an all-party consensus.

Enhanced awareness and understanding of defence and security matters should also avoid the discontinuities and politicization of procurement programs. A policy that reflects all-party agreement on the defence procurement needs and provides stable funding should prevent political interference, or poorly-informed or whimsical decisions.

The Cyber Dimension

Notable among the many changes in the security environment (including expanded asymmetric warfare, terrorist threats, as well as hosts of interconnected disruptions in the international political and economic systems) is the capacity for systems disruption through interference with computer software and hardware operations, commonly termed 'cyber attacks'. The current and developing capabilities in this area represent a capacity to effectively disable communications at the strategic, operational, and tactical levels - as well as computer data of all kinds, and especially control systems that involve energy production and distribution, finance and banking systems, telecommunications in the widest context, transportation, water supplies and data of all kinds. There is an urgent requirement to keep abreast of these developments and develop counter attack and neutralization systems capabilities.

A Comprehensive Whole of Government Policy Approach

Current threats are not given to wholly military solutions, but must involve capabilities for full-spectrum, whole of Government, responses. We cannot ensure Canada's security, prosperity, our values of freedom, democracy, the rule of law, and human rights - nor the stable world order we need to support our trade and prosperity - without such capabilities.

Just as military capabilities can no longer stand alone, the attraction to use "soft power" to achieve our national and international goals cannot be effective unless backed up by military means to enforce our national intent, and especially the ability to enforce national authority in our national territory, maritime and air space.

Canada-US Defence Relations Paramount

Although among the wealthiest of nations, we are disproportionately dependent on trade (especially with the USA) for our economic well-being. Also, because the major approaches to the USA cross our territorial landmass, maritime zone, and air space, we *must* maximize our security relationships with the USA and ensure seamless interoperability with its air, naval and land forces. Our defence contributions must also be sufficient to overcome any American concerns about the adequacy of our capabilities.

NORAD must remain vital and, preferably, expanded formally to include both naval and land forces. As well as Canada joining the U.S. Ballistic Missile Defence program for our own defence, we should support the replacement of the North Warning System. These measures are fundamental to, and essential for, the preservation of Canadian sovereignty – especially over the North that represents 40% of our national territory and contiguous sea and airspace.

Contributing to a Stable World Order

Canada must accept its responsibility to contribute to international stabilization operations, be they military or non-military. Our international alliances – NATO, in particular – are essential to our domestic security and well-being, and Canada must contribute in a significant manner to ensure that our interests are recognized and supported.

Canada must accept that its much-praised "UN peacekeeping history" is just that - history. In the newly globalized environment, UN operations are now as, or more, complex than NATO or other coalition activities. They require clear whole-of-government understanding, willingness, and capabilities in order to avoid defaulting to the Canadian Armed Forces for all international activities.

Canada *must* have a robust Foreign Service actively engaged in the various international fora where stabilization decisions are made, and to keep Canada's interests prominent with coalition and commercial partners.

Domestic Priorities

Many domestic factors also require effective military capabilities. CAF Reserves' ability to reinforce Regular Forces during increased operational tempos remains a primary need, but they must also be able to provide assistance to civil authorities and aid to the civil power under circumstances when local or regional "first responders" are overwhelmed.

Flood assistance in many parts of Canada, the Fort McMurray firestorm, the total evacuation of populations from remote towns, readiness to receive large numbers of refugees from abroad - these required military capabilities for airlift, search and rescue, transportation, logistics, and the availability of disciplined, trained, and organized personnel.

Given the size of Canada and the wide dispersion of the population across long distances, the regional presence of military Reserve forces will remain essential. In addition to providing the necessary personnel and equipment capabilities, these Reserve formations provide opportunities for training and part-time service to the nation by a broad cross-section of the population.

Canada's Army, Navy and Air Force Reserves each operate to entirely different models. But all have suffered from budgetary shortfalls as well as major structural, recruiting, and administrative problems. These have marginalized their capabilities.

The Canadian Rangers - a Reserve component mainly in the North and isolated communities - have key roles in community service and youth development with a capacity for enlargement and enhancement if appropriate leadership can be developed.

A formal review of the Canadian Armed Forces Reserves, with a view to confirming their roles as well as restructuring and increasing the size and capabilities of units to ensure the needs of communities, on the one hand, and the country at large on the other, should be a substantive component of a new Defence Policy.

Defence Procurement

Defence procurement is unique in Government and does not lend itself to the normal annual appropriations process and the disruptive loss of unexpended funds at the end of the fiscal year. Public understanding of defence costs can be enhanced by having a budget that clearly identifies defence costs, as opposed to non-defence items that encumber both operations and financial management, such as taxes paid to regional government.

Force structure and capabilities requirements must be the result of evidence-based analysis, advice from the Chief of Defence Staff and Deputy Minister of the Department, and informed discussion across government and Parliament. Within a policy document, the size and duration of possible commitments to deployments including provisions for contingencies should be clear and be the foundation for both force structure and procurement programs. Any changes to advice from CDS/DM should be accompanied by an assessment of resultant risks and clear statement of responsibility for such risk assumption.

The Men and Women Who Serve

Finally, The Canadian Armed Forces must be seen as an all-inclusive representation of Canadian society at its best – fit and well-educated young men and women, dedicated to the service of their country.

Current and future challenges in the security environment will require young people who recognize and understand the notable changes as unmanned land, sea, and air systems lead to technology-based alterations of operational doctrine and tactics. The cyber domain alone will require a substantial increase in military members with the capacity to manage these systems effectively.

This can only be accomplished through much broader exposure and outreach to young Canadians, through enhancing Cadet programs as a means to teach leadership and values of freedom, honesty, respect, loyalty, fairness, and compassion. As well, cadets are exposed to the advantages and opportunities of becoming members of the Regular or Reserve components of the Canadian Armed Forces. Further, through educational opportunities such as fully-subsidized university education in return for periods of Regular or Reserve service, a leadership foundation can be built for the nation.

CONCLUSION

Given the fundamental importance of defence and security as the first responsibility of Government, we submit these observations and recommendations as contributions toward the fulfillment of those obligations.

Attached are the collected specific comments to the 10 Consultation Questions submitted by the RUSI-VI members who have participated in this review so that the range of individual concerns will be fairly reflected in the final analysis.

APPENDIX A - KEY CONSULTATION QUESTIONS

THE SECURITY ENVIRONMENT:

- 1. Are there any threats to Canada's security that are not being addressed adequately?
 - a) The absence of a comprehensive international security threat assessment, including threats to trade and prosperity, upon which impacts on Canada's defence interests can be based for defence and security policy formulation. Situation awareness must be a constant, especially in matters of cyber security and the growing unrest and conflict potential in Asia-Pacific region, in addition to the Eastern Mediterranean and Central/Eastern Europe.
 - **b)** A broadly-based general public ignorance and apathy and a poorly informed political leadership concerning Canada's defence requirements in part based on the questionable assumption that the United States will always defend Canada.
 - c) Insufficient communication with the Canadian public on Canada's interests and values fundamental to an understanding of security and defence requirements.
 - **d)** Insufficient/absence of timely intelligence and security policy coordination across Government departments, e.g. lack of surveillance capability for all territory (primarily an Arctic concern) and the maritime approaches the latter vital to our Atlantic and Pacific trade (1/4 of total trade).
 - **e)** A defence and security policy as the first priority for the Federal Government followed by close collaboration for collective defence with NATO and other allies.
 - f) Insufficient maritime, air, and land forces and a general incapacity to contribute to coalition forces in times of their need for protection of Canada's sovereignty.
 - **g)** Insufficient emphasis on cyber defence, in particular, as well as ABM participation, anti-terrorism (including narco-terrorism, and organized crime and money laundering that is undermining the Canadian economy).
 - **h)** A lack of full clarification and amplification of Canada's interests or obligations under the Organization of American States.

THE DEFENCE OF CANADA AND NORTH AMERICA:

- 2. What roles should the Canadian Armed Forces play domestically, including in support of civilian authorities?
 - a) Aid to the civil power (including local crises, lawlessness, or insurrection) and assistance to civil authority should remain last resort responsibilities of the Canadian Armed Forces when local first responders are either unavailable or overwhelmed.
 - **b)** As a country of strategic distances and sparse population, military airpower in terms of lift, surveillance, search and rescue, and delivery of disaster assistance will remain a CAF obligation as the default Government department with the capabilities.
 - c) The provision of a well manned and equipped CAF, including Reserve forces, results in a tool box that can respond to all calls for assistance. Appropriate human, financial, equipment, and infrastructure resources - and appropriate organizational structure for this role - are mandatory and should be available across the country.

- i) Assistance in times of emergencies particularly forest fires, floods, earthquakes which might increase as the impact of climate changes becomes more apparent. Training in these areas should be a priority especially for Reserves who live in the affected area. The role of CAF in responding to the effects of climate change e.g., natural disasters, the Fort McMurray wildfire could result in taxing resources when they are required for response to a military threat or an international peace-enforcement mission. Therefore effective locally-based Reserves should be recognized as a necessity as opposed to a nicety and be trained and equipped to support and supplement local first-responders.
- j) Increased presence of tourists and large cruise ships in Arctic waters represent potentially huge rescue challenges in the event of an accident or disabling of ship with thousands of passengers.

3. How should Canada-United States cooperation on defence of North America evolve in the coming years?

- a) The single greatest imperative in Canada's defence security and sovereignty interests is the effective joint defence with the U.S. of the air and maritime approaches to North America through a seamless interoperability. Canada must, therefore, join the ABM program, as well as enlarge and re-equip its naval and air forces to a standard consistent with complete interoperability with U.S. Forces and replace the North Warning System failure to do so places our sovereignty at risk.
- b) The above implies closer cooperation with the USA in all aspects of North American defence and extension of the NORAD Agreement to include Naval forces and provision for Army cooperation as well, perhaps through NORTHCOM and, perhaps, joint basing of some operational forces.
- c) Rejuvenate the involvement of the Permanent Joint Board on Defence (PJBD) and the NATO Canada-US Regional Planning Group (CUSRPG) as means to keeping both Governments informed of issues of common defence and security interest.

CANADA'S CONTRIBUTION TO GLOBAL PEACE AND SECURITY:

- 4. What form should the CAF contribution to peace support operations take? Is there a role for the CAF in helping to prevent conflict before it occurs?
 - a) The complexities of the international security environment do not lend themselves to simplistic answers to a complex question. The Cold War style of "peacekeeping" a military guarantee to prevent armed conflict between two countries was aimed at preventing the escalation of minor regional conflicts into East-West confrontations that could lead to a NATO-WP war in Europe or a US-USSR nuclear exchange. Because these events could lead to the destruction of Canada, it was in Canada's vital interest to prevent its occurrence. Canada's military contributions except for the original Sinai UNEF and Cyprus operations did not involve combat troops but did provide combat support (communications and logistics) and combat service support contributions, including staff officers and observers. The interventions in the Balkans were not peacekeeping in any way. Clarity of terminology in these matters is essential. Peace enforcement is now as complex and deadly as coalition intervention operations.
 - b) "Peace-support" may involve training and organizational assistance and may include many non-military contributions from other Government Departments. Each circumstance would require analysis to define the best contribution that Canada could

make. However, a clear understanding of the scope and intent of such operations must be articulated, together with the allocation of human and financial resources that ensure training and readiness as well as logistics support during deployments, and capabilities for extrication should conditions so dictate.

- c) Peace Support, or Peace Enforcing, operations no longer mirror the Peace Keeping operations of the 70s and 80s. Canadian contributions to these with three exceptions were non-combat and relatively small involving largely logistics and communications capabilities in addition to observers. This misunderstanding has led to a "mythical" identification of the Canadian Armed Forces as "Peacekeepers", a notion of which the Canadian population must be disabused. Conflicts now have their roots in subversion and insurgency, requiring re-constituted "peace-support" bodies. Peace-keeping has evolved into peace-enforcing with considerably more risk.
- d) CAF have participated in activities and operations and been in a position to report atrocities but peace is not likely to be feasible, unless there is a rational controlling government on both sides. If the parties involved want victory, as opposed to a brokered peace, then there is little that can be done short of a very large military operation to impose peace - normally called "war"! The 1990s interventions in the Balkans and Rwanda were not "peace-keeping" in any way, but the violence and combat involved were not recognized at the time by the Canadian population.
- e) If prepared for war combat and the use of lethal force CAF will be able to meet any lesser operation. However, it must be adequately manned and equipped for very lengthy operations and we must concentrate on roles where we can add the most to the operation. A NATO capability will lead to a capability within UN needs threats are now global and diffused.
- f) Operations could take any form so long as there are, at minimum, clear and enforceable mandates, clear and identifiable reporting authorities, appropriate forces available for the missions, agreed operating principles, and a defined concept of operations, command and control structures, and clear rules of engagement. It may require many non-military contributions from other Government Departments. The model of the former Training Team concept, now based on interdepartmental and NGO involvement, if properly developed, could well be a useful Canadian capability for Government to utilize in the right circumstances.
- g) A lead role is currently beyond Canada's capability. We are better as part of an international agreement and/or organization participating under the authority of a UN Security Council resolution or as a coalition member of like-minded nations, with a clear date/time commitment to avoid mission creep. It requires adequately equipped and manned forces to carry out such peace missions while retaining the essential ability to respond appropriately to any subsequently emerging military threat.
- h) A CAF role in the prevention of conflict could be to make clear to the conflicted sides what the unintended consequences of war or warlike actions are going to be. We should actively seek involvement in early discussions (bilateral or multilateral) in order to find ways to reduce conflict before it escalates to requirement of armed forces. Preemptive measures to prevent conflict in the first place should be considered only as a last resort and with the military capability for the level of force necessary, subject to national and UN authority.
- i) We should emphasize military diplomacy by expanding our current military attaché network. Additional funding of the international Military Training Assistance Program is also an option. Robust diplomatic, economic and developmental assistance may assist in reducing regional tensions, lessening peace-support duties, so could be a significant foreign policy consideration.

- j) We can select countries or regions in need of assistance, train them, and provide equipment if necessary to enhance their capabilities. CAF can contribute via confidence building measures before a situation deteriorates and by demonstrations of force such as training troops and visibility.
- **k)** We need to re-engage with the UN when and where it makes sense. We can offer HQ staff and enablers (communications, logistics, engineers) on an "early in/early out" basis. Provision of combat battalions could be feasible only on a very limited basis.
- I) In areas where we have strategic national interests, we should be prepared to help prevent conflict hemispherically, or in support of Article V NATO operations

DEFENCE CAPABILITIES AND THE FUTURE FORCE:

- 5. Should the size, structure, and composition for the Canadian Armed Forces change from what they are today?
 - a) There is widespread concern that the Canadian Armed Forces in general, and the Royal Canadian Navy and the Reserves of all three services in particular, are insufficient to meet the demands of the current and perceived future security environment, and especially in terms of the protection of our own national sovereignty. Any complacency or short-changing of the human and financial resources cannot help but lead to limited readiness and responsiveness when demands occur. Once again, failure could lead to a loss of sovereign independence.
 - b) The question can't be answered definitively until the government sets out a clear foreign policy - from which defence policy capability and force structures are derived, and flow logically from a foreign policy foundation. Failure to appropriately structure CAF could lead to a loss of sovereign independence.
 - c) Once a solid all-parties agreement on the roles and responsibilities of CAF within overall foreign and economic policy is established, a force structure should then be tailored by the CDS to meet the goal and so advise Government. In any structure, there has to be honesty and commitment by Government to properly man and equip forces at the strength required to do the job properly and to maintain that required level as it alters over time with technological change. Canadians should be apprised by the CDS, as the military advisor to Government.
 - **d)** The composition will have to change with technology developments, as remotely controlled equipment including ships, aircraft, and tanks are integrated in all roles. Recruitment will have to include cyber-masters.
 - e) Currently, we do not have the forces to adequately participate with allies in protection of our interests - the present size, structure, and composition proved too small to sustain the relatively modest recent commitments in Afghanistan. We must limit missions that are beyond the capability of our small forces to sustain operations when operating in concert with the UN and NATO.
 - f) The Reserves warrant a dramatic re-organization and re-role, to reflect current conditions. They are an essential capability to support our limited Regular Force should they be viewed akin to the US model? Industry and government should be leveraged, and not just coaxed, to step up and support Reservists' participation and deployment. For this to happen, appropriate incentives must be provided. One of the primary not last priorities of the Regular Forces should be the recruitment, training, equipping, and development of Reserves for all three services. The development of

strong, imaginative leaders for the Reserves should be a high priority, to reflect the Reserves' needs.

6. How can DND and the CAF improve the way they support the health and wellness of military members? In what areas should more be done?

- a) The current capabilities to provide health care in its broadest context certainly appear adequate, although there continue to be concerns about access to the availability of family health care in more remote bases (let our doctors and dentists look after our military families as they did in Germany in the 1960s).
- b) The leadership of the CAF at all levels must continue to perform in accordance with their professional obligations, and failures to do so must be addressed quickly. Any abuse or harassment cannot be tolerated. Create and maintain zero tolerance for all forms of harassment, discrimination, and abuse. Embed the necessary training to affect attitudinal change in all training and education at all levels.
- c) Personnel support activities, including sports and recreation, appear to be well supplied and well-managed although some members of the Forces have the attitude that they are civil servants in uniform. They are not; we need to greatly enhance fitness levels among all members of the CAF, including more work on healthy eating, and minimizing abuse of both alcohol and drugs.
- d) The treatment of those who are injured or become ill while on duty must be accomplished with compassion and to the highest standard to return them to duty as quickly as possible. Should rehabilitation to duty standards be impossible and release be unavoidable, treatment with compassion and respect must be the order, and in keeping with the fact that Canada's military voluntary enter service accepting unlimited liability including death giving Government a corollary reciprocal responsibility to provide appropriate lifelong support in accordance with the long-standing traditional response to that obligation. There should be no "classes" of veteran that lead to differentiation in access to necessary care.
- e) It has taken ten years of hard work by the veterans' community to slowly gain back what was taken away from veterans, especially those who fell or were wounded in the Afghan campaign. The so-called Veterans Charter and Improved versions remain flawed in applying a "workman's compensation and disability insurance" approach to Canadians who serve under the unique unlimited liability employment agreement. It is a moral and legal duty and responsibility of Government to recognize the uniqueness of military service, its risks and dangers, and, therefore, the need for special provision to those injured or killed in the line of duty or as a direct result of military service.
- f) Involvement of members via a "combat buddy system" while serving and after release is fundamental. Once augmenters to operations (reservists and others), leave the deployed unit at the end of an operation, they are orphans and need to be tracked by the medical system and their former leaders.
- g) There should be greater flexibility in the universality of service. If a member has been injured on foreign service, then he/she should be retained if at all possible. A wounded NCO is still an excellent instructor/mentor.
- h) Improvement is needed in the administrative competency, application response times, and the thoroughness of case evaluations the soldier who has had to state every year that his legs were blown off in an IED incident in Afghanistan reflects mindless incompetence. The post-release administration of benefits must not be subject to bureaucratic delays through "process" but be expedited as part of the commitment to compassion and respect for the individual's service. Failure to do so will certainly

affect both the morale of those serving as well as their recruitment at the outset and retention in times of need, danger, or distress.

- i) CAF's support of veterans experiencing PTSD appears to have been most unsatisfactory. An increased focus on such issues, with the provision of appropriate resources, is essential. Given the evolving nature of combat, we should expect increased cases of PTSD going forward.
- j) Better management is required of both deployable time and support to families while troops are away. With all extended deployments, knowing that the family is being properly cared for while the serviceperson is on deployment (or extended training) is a major factor contributing to excellent morale.
- **k)** Improvement is needed in mental health support to serving members; we should make psychological training a part of all pre-deployment training. Personnel who provide this training should deploy with the unit on the operation and conduct post-operational follow up.

7. Should Canada strive to maintain military capability across the full spectrum of operations? Are there specific niche areas of capability in which Canada should specialize?

- a) Specialization or "niche" roles are the refuge of the uninformed. Canada cannot afford to be seen to be dependent on the USA or allies to "fill in the blanks" in our capabilities as this could lead members of the CAF - and the country - to unpredictable risks and dangers, including loss of sovereignty. Niches can, in themselves, have very limited utility without all the associated supporting services normally involved in full spectrum capabilities.
- b) Full-spectrum capabilities or "general purpose forces" recognize the various risks in the "spectrum of conflict" and it has been shown repeatedly that the point or points on that spectrum at which CAF will be called upon to operate have been unpredictable. Canada, given its geography and geopolitical position, would stand to lose its flexibility in response to domestic and international necessities, at the very least, and its sovereignty at worst, if beholden to the USA for security and defence.
- c) As emphasized in all defence reviews going back 50 years, we need to maintain multipurpose, combat capable, forces that are seamlessly interoperable with our potential coalition partners and paramount in the case of our U.S. partner to meet the crises of an unpredictable world. The full spectrum of operations capability is what it is a basic "ante" required to get into the game as an influential player and to be allowed to stay and have some influence. To not be part of the heavy lifting makes the capability little more than an add-on tool for other players. Whoever fills the spectrum part that CAF can't, or won't, fill will also take the sovereignty that would have been protected. If full spectrum is unachievable, our capability must be broad enough to accommodate threat surprise and change. There are aspects of the Israeli system that may show how this is best managed.
- **d)** In aerospace surveillance, the decision to withdraw from NATO AEW and Alliance Ground Surveillance Program should be reviewed this is a part of the concerns expressed, above.
- e) Specialization requirements will change over time, so the forces should be organized with maximum flexibility in mind. Some areas will require active-ready forces, others may be primarily filled by Reservists on short notice call out. There are aspects of the

Israeli system that may show how this is best managed. Once a military capability is lost, it is very difficult to retrieve it or get it back.

- f) CAF should avoid niche specialization it may not always be required and would preclude independent operation. The principal focus of the military has been to maintain a combat-capable, multi-role force that can quickly adapt to unpredictability and not to overly specialize in niche capabilities. That avoids the potential issue of having invested completely in the wrong ones. CAF can specialize in traditional areas of operations: anti-submarine warfare; Arctic surveillance.
- **g)** CAF should have a Special Forces capability for domestic response needs and to participate in carefully selected special operations where North American interests are at stake.
- **h)** Defence of the Arctic requires special training and equipment to meet the challenge, otherwise we will simply add to the casualty rate of military units.
- i) Relieve DND of civil-society domestic services, unless related to combat deployments in multi-national engagements or where the civil authority is overwhelmed.

THE DEFENCE BUDGET:

- 8. What type of investments should Canada make in space, cyber, and unmanned systems? To what extent should Canada strive to keep pace and be interoperable with key allies in these domains?
 - a) Canada lacks a strategic comprehensive national strategy. A national policy (dealing with space, the cyber-digital world, and intelligence) would seem to be a good place to start. Such a policy would need to be inter-departmental as the threats go beyond just defence and must be addressed from a government-wide perspective. Such a coordinated approach would also enhance our contribution to our allies. Defence alliances require that we keep pace or we will no longer be considered as reliable and capable allies.
 - b) Space, cyber, and unmanned systems are key elements for developing such strategy and are investments that we need to make, in order to keep pace with, and be interoperable with, our allies particularly the USA. This will involve money, human resources, and technology. Seamless interoperability with our allies, particularly with the US armed forces for North American defence and security, is a must across these three domains. The Five Eyes consortium will have to be closely linked in their individual and collective interests. Any single national weakness could be interpreted as a vulnerability and thus exploited by cyber aggressors.
 - c) Canada must stay abreast of the technical developments in these areas and at the level of commitment of forces that have the capability of defensive and offensive use of each of these. It is critical that we keep pace with cyber security systems if we wish to be prepared for any future conflict. Given the increasing risk, we cannot afford not to be on leading edge, so this requires cooperation with allies.
 - d) Given our massive geographical foot-print, investments in space and cyber systems are necessary, because we can no longer afford to keep old systems in operation. Space surveillance capability is an essential element of our sovereignty, considering our huge territory.
 - e) At the Strategic level, cyber operations require interdepartmental coordination and international sharing of resources and information to meet the threat and to combat the

threat offensively. Cyber operations are critically linked to space and space-based systems - and with NORAD, but more broadly.

- f) We need to have 24/7 multi-spectral sensing capabilities over all our sovereign territory and waters. For this, space-based sensors are by far the most the most efficient means to monitor Canadian territory and waters - but we need to solve the lack of dedicated satellite coverage above 65 degrees latitude. This can be supported by medium altitude, long endurance UAV, for domestic and international surveillance, but communications challenges remain, especially to ensure positive control of UAVs.
- **g)** The lower level capability that the CAF has for interdepartmental interoperability for example in the maritime domain with Coast Guard, DFO, and RCMP is automatically useful in Coalition Operations with tier 3 Navies and Coast Guards

9. What additional measures could the DND undertake, along with partner departments, to improve defence procurement?

- **a)** Every defence review promises to fix this problem. None have. Suggestions made in development of this submission include:
 - Obtain priority access to the Cabinet agenda for all defence and security Major Crown Project considerations. This will require the highest level of political support to become policy.
 - Wean the government off the notion that CAF procurement can exist as an engine for economic development. Resolve the conflicts between DND capability requirements, PWGSC goals of regional development and direct and indirect offset policies, and government's desire to gain maximum political (not necessarily operational) benefit from DND capital expenditures.
 - Cease the "made-in-Canada" requirement and demands for unique "Canadian" equipment and systems, so that there is a greater return on the tax investment in defence. When we build in Canada, base it to the extent possible on proven designs from other countries that meet our requirement for on-time and on-budget procurement. Collaborate with allies in all roles.
 - Maximize Canadian industrial participation, but buy off-the-shelf where possible to minimize overall cost, maximize value for money procurement, and not reinvent the wheel.
 - Reduce the number of review levels, and the number of authorities and agencies that "have a say", in the project approval process. Minimize the procurement bureaucracy and political interference it should not be a means of impeding procurements. Specific and measureable objectives for accountability should be applied with penalties for failure.
 - Ensure that those who are involved understand the national strategy and military requirements. There must be knowledge and competency in other Government departments to understand the capability requirements of the CAF, to understand the costs of delay, and to understand that multiple bidders may not always be the best approach, especially considering timeliness in availability and delivery.
 - For all federal government procurement of ships, stop the boom and bust process. Procure ships on a trickle system where there are ships in build all the time, not one major batch every 30 years. Current naval procurement proceeds as a defined project having a conception, proceeding to development, and an end. Such procurement should be open ended, based on a good generic hull evolving into several marks as technology develops. Do not accept a lesser capability by disbanding critical unit equipment procurement.

- A policy that reflects all-party agreement on the defence procurement needs and provide stable funding should prevent political interference or poorly-informed or whimsical decisions. Defence procurement is unique in Government and does not lend itself to the normal annual appropriations process with its disruptive loss of unexpended funds at the end of the fiscal year.
- **b)** The key to the CF-18 program's success was a team effort by DND, PW&GSC, and Industry Canada co-located and working closely together in the CF-18 project office. Cannot this approach be duplicated, today?
- **c)** In addition, improved communication to the general public is necessary, in comprehensible language, so that the public can understand why such procurements are needed.

10. What resources will the CAF require to meet Canada's defence needs?

- a) Canada has a long tradition of under-resourcing CAF to meet agreed commitments. CAF needs a basic full-spectrum capability that can be rolled from aid, to civil power, to war fighting - i.e., a full basic-level tool box that provides the ability to join coalition operations on all levels of the spectrum of operations, from disaster assistance to war fighting, but doing so as a credible partner with seamless interoperability, where necessary and practical.
- b) The resources necessary cannot be arbitrarily stated without clarity of analysis of the future security operating environment what impact a multiplicity of factors will have on Canada's sovereignty, security, global prosperity and stable world order interests, and our national values. It would be cynical in the extreme to simply set a spending ceiling or program in place without such analysis. It should also be based in a whole-of government assessment of departmental responsibilities as opposed to DND alone. It can be safely predicted that Canada will have to spend more, and more effectively, to maintain its sovereign independence. Our comparative per capita defence expenditures as a wealthy country with geographic and geopolitical challenges are an indicator of our vulnerability to more intense scrutiny and criticism from allies.
- c.) If the government is actually serious about defence of the realm, leadership will need to be exercised to fund the CAF at an appropriate level to overcome years of rust-out, extended service dates of equipment, and to make the needed investment that has so long been ignored. The security of Canada cannot be, or be seen to be, a purely single party political issue. It is the responsibility of Government as a whole. This responsibility is magnified by the rapid and unpredictable changes in the international security environment.
 - The CAF will need, in addition to people, money, strong leaders, and the restriction of meddlesome bureaucracy, a Federal government that understands the need for a military force that is large enough and flexible enough to fulfil its assigned roles, capable of protecting Canada's interests in a deteriorating international security environment. This will necessarily include exceptional professional competence in all areas
 - The Canadian Army will require a structure that will permit it to operate in global environments, in combat, combat support, and combat service support operations. The size will be dictated less by the current structure than through needs analysis in terms of personnel and the changing technical needs of the rapidly changing environment. Special Operating Forces are proving to be effective in smaller numbers, especially in training roles for vulnerable nations.

- The Air Force needs to replace the CF18 and ensure that we can operate in any threat environment and in seamless interoperability with the USA and, to a lesser extent, with our European NATO allies, especially providing for the defence of Canada and approaches to North America. This implies that the minimum force size should be enough aircraft to provide air defence of Canadian airspace while also deploying a combat package for an unlimited time. In addition, replacement of air-to-air fueling and maritime patrol aircraft will be essential to the protection and maintenance of Canada's sovereignty. These programs should be addressed promptly and funded to avoid interruption of capability within the next 10 years. The current air transport fleet appears adequate for the time being as does helicopter transport support to the Army. However, the procurement of an attack helicopter would add considerable capability to our ground forces and should be pursued. With the Sea King replacement finally about to enter service, helicopter support to the Navy should be adequate.
- Rebuilding a small depleted Navy into a multi-ocean blue-water through a National Ship Building Strategy is absolutely vital to avoid the boom and bust history of naval ship building in Canada. The RCN Leadmark 2050 is a document that clearly articulates Canada's Maritime power needs, but without detailing quantities. A Government consultation with the Chief of Defence Staff and Commander RCN should address these needs in detail and ratify a long-term plan. Canada needs a Navy that can protect the maritime approaches to Canada, our sea lines of communication, and deploy in concert with allies to defend Canada's interests abroad. It must be able to do so with surface and subsurface combat ships and support ships that permit integrated task force operations.
- d) The operational environment and military equipment is changing rapidly as systems such as unmanned aircraft and armoured vehicles change the battlespace, as well as the impact of cyber systems. To many, the attraction of unmanned surveillance of Canada's most remote areas, for example, would be a low cost replacement for patrol aircraft. However, communication in the far North is made difficult and unreliable by the electromagnetic environment and natural phenomena such as solar flares plus, the possibility of cyber interference creates a challenge for the guaranteed control of these aircraft in a controlled aircraft operating environment. Furthermore, satellite communications of a standard routinely found in areas south of 60-75 degrees North do not currently exist in sufficient numbers in polar orbits. These are but a few of the rapid changes affecting a future force. Therefore, a major challenge for the future will to be finding the people who are well enough educated and trained to meet the very demanding tasks in an increasingly complex and highly technical environment, whether full-time Regular Force or part-time Reserve Force. Innovative subsidized education programs will likely prove necessary but also attractive to quality applicants.