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# **The RCAF and the Role of Airpower: Considering Canada's Future Contributions**

**by Alan Stephenson**  
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By Alan Stephenson

CGAI Fellow

July, 2016

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## INTRODUCTION

**T**he principal role of the Royal Canadian Air Force (RCAF) is to provide the government of Canada with military capabilities unique to the air environment that are essential to the defence and security of Canada. This is termed airpower and is functionally classified into four core capabilities<sup>1</sup> foundational to air forces worldwide: control of the air; air attack; air mobility; and air ISR (intelligence, surveillance and reconnaissance). Each of these core capabilities is critical to ensuring Canadian sovereignty, defence of North America and contributing to international peace and security.<sup>2</sup> These key defence roles set the priorities by which the Canadian Armed Forces (CAF) organize, train and equip forces for service-specific<sup>3</sup> military roles and missions. Properly resourced, the distinctive characteristics of airpower (flexibility, speed, reach and agility<sup>4</sup>) provide the government with significant latitude in determining policy options for immediate responses to domestic and global events by the CAF.

## AIRPOWER AND ROLES

Given the geographic challenges of protecting Canada, the RCAF currently possesses a range of capabilities that deliver rapid airpower effects throughout the spectrum of Canadian national security.<sup>5</sup> Limited resources and the high cost of technologically advanced aviation platforms compel the RCAF to provide broad capabilities via multi-purpose aircraft that are combat capable for air force employment in conventional conflicts, but are agile enough for various non-combat tasks. As an integrated service of the CAF, the RCAF is also responsible for the provision of organic airpower to the Royal Canadian Navy (RCN), Canadian Army (CA) and Canadian Special Operations Command (SOFCOM). The RCAF provides close support and surveillance to the RCN, CA and SOFCOM operations in addition to providing primary CAF support to non-defence search and rescue missions.

The airpower capabilities that the RCAF generates are exercised through a unified command structure for force employment in one of three ways: by the Commander of the Canadian Joint Operations Command (CJOC); by the Commander of the North American Aerospace Defense Command (NORAD) through the binational command structure; or via direct tasking to the Commander of 1 Canadian Air Division.<sup>6</sup> The ubiquitous demand for air assets and their inherent flexibility set a central tenet of airpower – centralized control and decentralized execution. This has led to the development of the air task force (ATF) concept that tailors airpower requirements to a specific operation, mission, or task through allocation and apportionment of scarce RCAF resources. As the senior advisor to the Chief of the Defence Staff (CDS) on air force issues, the Commander RCAF provides the air capabilities' framework for the dialectical discussion on ways and means to use airpower to achieve government and military objectives. Through strategic guidance publications, the Commander RCAF has articulated the core capabilities, contemporary roles and mission sets that a balanced air force requires to meet the enduring defence roles unique to Canada.<sup>7</sup>

Why is this preamble necessary? It is important to understand the distinct challenges in delivering airpower in Canada because calls for the Defence Policy Review (DPR) to provide policy specificity to enable capital procurement<sup>8</sup> misunderstand the relationship among capabilities, roles, missions and policy decisions on employment. There are four dimensions to airpower<sup>9</sup> (political, operational, economic and technological) that need to be considered by government during policy and procurement decisions. Core capability requirements of airpower



establish the essential roles that need to be performed for the basic defence of Canada that then inform decision-makers on the types of 'tools'<sup>10</sup> needed to accomplish the mission sets. Demands for 'clarity' generally focus on the political and operational dimensions, however, all four dimensions play a critical role in determining the right mix of equipment/systems. Due to the interrelated complexities of each dimension, caution must be exercised in attempting to determine *a priori* specificity in any one. This is particularly true given the dynamic geopolitical environment where future strategic decision-making will require flexible capabilities to deal with volatility, uncertainty, complexity and ambiguity.<sup>11</sup>

## USES OF AIRPOWER BY GOVERNMENT

Inherently expeditionary, airpower provides one of the most flexible instruments available to Canadian policy-makers. It offers the ability to project power quickly and precisely, but with a minimal footprint. It can be started, stopped, phased, or shaped as required by decision-makers and the situation. It can be deployed over great distances at short notice and can operate immediately upon arrival in roles appropriate to evolving circumstances. In times of tension, alliance airpower adequately deployed denies an aggressor a low-risk strategy. The recent deployments of CF-18 fighters on NATO (North Atlantic Treaty Organization) air policing and air sovereignty missions<sup>12</sup> were deterrence demonstrations of solidarity, and as much a form of peacekeeping as blue helmets and United Nations (UN) mandates. Should deterrence fail, airpower plays a key role in regulating the escalation process.<sup>13</sup> Maintenance of a rules-based order in the international system requires collaborative 'policing' to ensure the functioning of the international institutions that enable international peace and security operations. As a leading proponent of international multilateralism, it is incumbent upon Canada to have the proper tools and the will for coalition enforcement of international jurisprudence as well as participation in the protection of international society and its institutions.

Airpower's core capabilities provide the government with cost-effective flexibility for a wide scope of action from humanitarian support missions led by other government departments to combat operations with allies under UN resolutions.<sup>14</sup> Given the uncertain geopolitical environment described in the *Defence Policy Review: Public Consultation Document 2016*, safeguarding foundational roles and missions for the RCAF is essential. For example, a few years ago, no one would have predicted that core combat capabilities would have been employed in operations by Canada against a resurgent, bellicose Russia, or predicted the emergence of Islamic State of Iraq and the Levant (ISIL).<sup>15</sup> The government has a 'Responsibility to Protect.' That responsibility begins at home and follows the path identified by the key defence roles. Sovereignty was first outlined as the primary defence role for the Canadian military by the 1971 White Paper on Defence and has remained so for 45 years. Loss of any core military capability comes at a cost to sovereignty when the ability for independent action ceases. "Leveraging partnerships"<sup>16</sup> must not be used as a near-term cost-avoidance exercise that marginalizes CAF effectiveness to protect Canada, but need to be approached in the context of a future operating environment that may require the periodic use of key strategic assets found in a balanced military force structure.



Combat Camera

## FUTURE OPERATING ENVIRONMENT

Current analysis of the geostrategic environment indicates that core combat capabilities will remain relevant and necessary in modest numbers well into the future for protection from a nebulous threat set. Rather than focusing on countering specified threats, the paradigm in the Defence Policy Review needs to shift to one that understands the future air operating environment in which Canada will be functioning. Under the Unified Command Plan (UCP), the United States has constructed a global security complex of interconnected military enablers that allows regional combatant commanders to establish an integrated air and missile defence (IAMD) system. This networked system is designed to treat all aerial threats – cruise missiles, ballistic missiles, aircraft and uninhabited aerial vehicles (UAVs) – as a singular domain and is currently in place in both NATO and North America, despite Canada's participation in ballistic missile defence (BMD) in Europe but not in North America. Canada needs to reconsider this domestic policy anomaly, particularly as NORAD relies upon the North Warning System (NWS) which is due for replacement in the 2025 timeframe. The recapitalization of this critical IAMD element provides Canada the opportunity to leverage the technological dimension of airpower into an all-domain awareness NWS through space-air synergies and networked ISR capabilities.<sup>17</sup> A system such as this would significantly enhance Canadian sovereignty over desolate regions.

Incorporating the Future Fighter Aircraft into this alliance IAMD network will be critical to both NORAD and NATO operations. Interoperability with the United States is an essential consideration as the degree to which Canada chooses to integrate all future airpower capabilities affects the other three dimensions of airpower. This is the reason why all four dimensions need to be considered in major recapitalization options analysis. Canada has the opportunity to shape the North American air domain to fit its unique needs, but only if the government understands and embraces a comprehensive approach to Canadian airpower. Space and UAVs incorporate specific areas of technology that will benefit and increase the ISR capability of the RCAF,



enhancing both networked organic air force needs as well as in support roles to other services. As UAVs evolve, demand will grow and the government will need to be cautious in determining the capability gaps these niche platforms are to fill in order to avoid false economies.

## POLICY RECOMMENDATIONS

The contemporary roles and missions identified by the Commander RCAF<sup>18</sup> are fundamental to the defence of Canada and will remain valid for the foreseeable future. Prudent fleet investments in life extension modifications and technological upgrades will ensure many current platforms will continue to be operationally safe and technologically relevant. Prudence needs to be exercised by the government in reconciling political party platform positions<sup>19</sup> with public policy decisions, particularly with respect to the capital acquisition of a CF-18 replacement aircraft. Canadians are discussing a Future Fighter Aircraft today for the simple reason that, in 1980, the Pierre E. Trudeau government took the unprecedented decision to be the first foreign customer of an unproven US Navy fighter aircraft, the F/A-18. The issues in the current debate are not that dissimilar to those of the late 1970s. It is therefore essential that all dimensions of airpower receive consideration during analysis<sup>20</sup> to determine the best option for large capital procurements since simplistic 'unit fly away costs' skew discussion in the economic dimension away from life-cycle costs that will allow the CF-18 to operate for over 40 years. As well, debates over one engine versus two obfuscate consideration of other critical distinguishers in the technological and operational dimensions.

Specific recommendations include:

- The Defence Policy Review should focus on maintaining core airpower capabilities, roles and missions, then incorporate emerging capabilities as increases in defence budgets permit.
- Operational deployments of long duration should be minimized to maximize funding for capital projects.
- The RCAF should invest in life extension programs to maximize fleet life expectancy.<sup>21</sup>
- The RCAF must be capable of participation in both control of the air and air attack combat operations at home and abroad. Canada should maintain the capability to deploy and sustain six multi-role fighter aircraft with air-to-air refuelling to support NATO- or UN-sanctioned operations in addition to defence of Canada commitments.
- Mobility support to the CAF and alliance partners should remain the basis for assigned mobility roles and missions. The government could consider increasing airlift contributions to complex peace support and traditional peacekeeping missions as well as humanitarian assistance operations.
- Given recent recapitalization of organic helicopter capabilities as well as life extension projects to the CP-140 and CH-146, RCAF roles and missions in support of the RCN, CA and SOFCOM should remain at current levels pending available funding for increased UAV ISR capabilities.



- Search and rescue should remain a required RCAF role.
- The recapitalization of the North Warning System with the United States should be approached from a holistic perspective to maximize Canadian sovereignty and national interests through ISR integration with national capabilities (joint, interagency, multinational, public concept).
- Replacement of the CF-18 is required by 2025. As the CF-18 has proven to be flexible and resilient during changing political and threat environments, the Future Fighter Aircraft must be multi-role and capable of integration into the technologically evolving IAMD construct. Cost-effectiveness requires that analysis of all four dimensions of airpower be considered in the options analysis.
- Space and UAV ISR technologies need to be integrated into RCAF core capabilities as funding allows. Given that CP-140 and CF-188 platforms already fulfill air-to-surface attack roles, augmentation by uninhabited combat aerial vehicles (UCAVs) should be considered only with significant increases to the defence budget.

## CONCLUSION

However remote major conflict may seem in the current geopolitical environment, the possibility that the RCAF will be called upon to participate in combat operations in the future cannot be ruled out. The fourth century dictum of Vegetius, *si vis pacem, para bellum* (if you want peace, prepare for war), is still applicable today. Combat-capable platforms can be used for non-combat missions whereas the reverse is not true. An appreciation of the capabilities and limitations of the RCAF is essential to understanding its contributions to the peace and freedom Canadians hold so dear. The economy is under duress and prudent decisions must be made. However, volatility, complexity and uncertainty in the international environment will threaten Canadian values and interests in unpredictable ways. The government needs to approach the Defence Policy Review as the preservation of Canadian values rather than as a defence against identified threats. The government has a 'Responsibility to Protect' Canada and Canadians, neighbours in North America, friends and alliance partners, and the international system and society – in that priority. These imperatives demand a balanced RCAF in terms of the breadth of capability needed to meet national security and defence requirements in both domestic and deployed operations. In an uncertain geopolitical environment, maintenance of core RCAF capabilities, roles and missions is essential to the flexibility needed by the government of Canada in ensuring the preservation of the Canadian way of life.



<sup>1</sup> The RCAF identifies these four enduring airpower deliverables as 'core capabilities,' while the USAF identifies them as 'missions,' the RAAF as 'fundamental roles' and the RAF as 'capabilities.'

<sup>2</sup> These basic defence policy priorities identified on page 5 of *Defence Policy Review: Public Consultation Document 2016* have been consistent with successive Canadian governments in one form or another since the 1971 White Paper on Defence issued by the Pierre E. Trudeau government.

<sup>3</sup> As various terms have been used to indicate the three component parts of the CAF (sea/land/air environments, components, elements) and with the return of historic identities, this article will make use of the term 'services' to indicate functions performed by the RCN, CA and RCAF.

<sup>4</sup> A complete set of airpower characteristics used by the RCAF can be found in Department National Defence, *Canadian Forces Aerospace Doctrine*, B-GA-400/FP-000, 2<sup>nd</sup> edition, December 2010, pp. 25-26.

<sup>5</sup> Canadian national security is Canadian society/state centric, as defined by *Securing an Open Society: Canada's National Security Policy*, 2004, prioritized for military purposes by the three key defence roles. International security is identified as a sub-set of national security in Chapter 8. The *Defence Policy Review: Public Consultation Document 2016* essentially reaffirms this interpretation, pages 4-17. For deeper analysis, see Alan Stephenson, "Canadian National Security Culture: Explaining Post 9/11 National Security Policy Outcomes," unpublished PhD dissertation, May 2016.

<sup>6</sup> Here the *Defence Policy Review: Public Consultation Document 2016* is factually incorrect in the section "Understanding the Environments," pages 18-19, on two counts. First, the Commander of NORAD is an operational commander in his own right, reporting directly to the Chief of the Defence Staff (CDS) with no command link to the CJOCC. Secondly, each 'environment'/service conducts prescribed operations/missions as a result of direct tasking by the CDS (through the Strategic Joint Staff) or via Memorandums of Understanding with other government departments. Neither of these command chains can be termed joint operations. Joint is a concept of organization to ensure allocated capabilities are optimized for specified operations by a designated operational commander. Recently, the meaning of *joint* in CAF lexicon has been conflated to be synonymous with *integrated*.

<sup>7</sup> Department of National Defence, *Air Force Vectors: Agile, Integrated, Reach, Power*, A-GA-007-000/AF-008, 1<sup>st</sup> edition, Ottawa, 2014; *Canadian Forces Aerospace Doctrine*; Andrew B. Godefroy, *Projecting Power: Canada's Air Force 2035*, Ottawa, Canadian Forces Aerospace Warfare Centre, 2009.

<sup>8</sup> An example can be found in Ferry de Kerckhove, *The Strategic Outlook for Canada 2016: In Search of a New Compass*, Vimy Paper No. 27, Conference of Defence Associations Institute, 2016, p. 45. De Kerckhove writes, "It is imperative that the new defence policy shows absolute clarity about the specific needs for a fighter aircraft, the desired capabilities, and the general prospective uses."

<sup>9</sup> These dimensions also apply to sea, land and space power. Philip A.G. Sabin, *The Future of United Kingdom Air Power*, London/Washington: Brassey's Defence Publishers, 1988; Philip Sabin, "The Future of UK Air Power," *The RUSI Journal*, Vol. 154, No. 5 (2009), pp. 6-12.

<sup>10</sup> Minister of National Defence Harjit Sajjan announced in a government news release on the Defence Policy Review that "The Government of Canada is committed to ensuring the Canadian Armed Forces (CAF) has the tools it needs to defend Canada and North America, and to contribute to a wide spectrum of operations globally. The review will help set future direction and priorities so that our military is equipped, trained, and prepared to confront new threats and challenges in the years ahead." The word 'tools' is used throughout the *Defence Policy Review: Public Consultation Document 2016*.

<sup>11</sup> National Defense University, Air War College, "Strategic Leadership and Decision Making," Australia, no date, available at <http://www.au.af.mil/au/awc/awcgate/ndu/strat-ldr-dm/pt1ch2.html>.

<sup>12</sup> *Operation Reassurance* included an air task force (ATF) for Baltic Air Policing as well as an ATF for multi-role training missions in Romania (In a demonstration of flexible employment, four CF-18s returning from combat operations against ISIL (*Operation Impact*), were deployed directly to Romania to participate in NATO training exercises); *Operation Ignition* is Canada's periodic deployment of an ATF to meet Iceland's peacetime preparedness needs in the absence of its own standing military.

<sup>13</sup> "Because of its inherent responsiveness and mobility, air power allows appropriate firepower to be concentrated rapidly at the point – or points – of greatest need, without time-consuming preparatory and deployment measures characteristic of other types of military force.", Sabin, 1988, p.4.

<sup>14</sup> On the first count, *Operation Provision* was the CAF support to the government of Canada's initiative to resettle 25,000 Syrian refugees in Canada by the end of February 2016. On the second count, *Operation Friction* was Canada's contribution to the coalition force in Persian Gulf War 1 in 1990. Additionally, Canada was engaged in multiple combat operations in Afghanistan over a 12-year period, under UN Security Council Resolutions.

<sup>15</sup> *Operation Impact* is the CAF contribution to the Middle East Stabilization Force (MESF) – the multinational coalition to halt and degrade the so-called Islamic State of Iraq and the Levant (ISIL). The CF-18 attack role in



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*Operation Impact* was a classic mix of air interdiction and close air support missions that directly shaped the battlefield for coalition army units.

<sup>16</sup> *Defence Policy Review: Public Consultation Document 2016*, p. 6.

<sup>17</sup> ISR information supplied from interagency capabilities such as the National Aerial Surveillance Program run by Transport Canada could be fed into the NWS database and collated into a shared national operations picture.

<sup>18</sup> Department of National Defence, *Air Force Vectors*, 2014, Chapter 3.

<sup>19</sup> Liberal Party of Canada, *Real Change: A New Plan to Strengthen the Economy and Create Jobs with Navy Investment*, September 2015, available at <https://www.liberal.ca/files/2015/09/A-new-plan-to-strengthen-the-economy-and-create-jobs-with-navy-investment.pdf>

<sup>20</sup> This analysis was conducted by public service subject matter experts in the National Fighter Procurement Secretariat and the results were verified by an independent review panel in 2014. Although government procurement assumptions will vary, the estimated 40,000 hours of analysis into the many platform options that were considered should not be casually disregarded. Unclassified information is available at <http://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/air/snac-nfps/cdp-nr-eng.html>.

<sup>21</sup> Maintain the current RCAF life extension plans for the CF-188, CC-138, CC-177, CP-140 and the CH-146 fleets.

## ► **About the Author**

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*Alan Stephenson is a Fellow at the Canadian Global Affairs Institute, holds a PhD from Carleton University, and is a veteran of the Canadian Armed Forces with 3600 fighter hours flying third generation CF-104 Starfighters and fourth generation CF-18 Hornets. He has held senior appointments in National Defence Headquarters, NATO and NORAD.*



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