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IT TAKES A VILLAGE: CLOSING THE CAPABILITY GAPS DURING THEATRE ACTIVATION AND THEATRE OPENING BY RELYING ON OTHERS

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OTHERS**

By Major Janaya Hansen

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TABLE OF CONTENTS

Table of Contents	i
List of Abbreviations	ii
List of Figures	vi
List of Tables	vii
Abstract	viii
Chapter	
Introduction.....	1
1. Evolution Toward Expeditionary Operations	7
2. Gaps in Theatre Activation and Opening Activities - Case Studies	18
3. Planning for Theatre Activation and Opening	31
4. External Sources for Logistics Support	51
5. Recommendations & Conclusion.....	75
Bibliography	84

LIST OF ABBREVIATIONS

AAR - Air-to-Air Refuelling

ABP - Afghan Border Police

ACSA - Acquisition and Cross-Servicing Agreements

AEW - Air Expeditionary Wing

ALOC - Advanced Logistics Officer Course

AO - Area of Operations

ARFF - Aircraft Rescue and Fire Fighting

ATF - Air Task Force

AvPOL - Aviation Petroleum, Oil and Lubricant

BAP - Baltic Air Policing

C2 - Command and Control

CAF - Canadian Armed Forces

CANCAP - Canadian Forces Contractor Augmentation Program

CANSOF - Canadian Special Operations Forces

CEPMA - Central Europe Pipeline Management Agency

CFDS - Canadian First Defence Strategy

CJOC - Canadian Joint Operations Command

CJTF - Canadian Joint Task Force

CONPLAN - Contingency Plan

DART - Disaster Assistance Response Team

DLN - Defence Learning Network

DLSSO - Defence Logistics Support and Services Standing Offers

DND - Department of National Defence

Dom Ops - Domestic Operations

DTB – Defence Terminology Bank

DWAN - Defence Wide Area Network

EART - European Air Refuelling Training

ETAP - European Tactical Airlift Programme

EFH - Equivalent Flying Hours

EUCOM - United States Europe Command

FARP - Forward Area Refueling Point

FE - Force Employ

FEA - Fuel Exchange Agreement

FLS - Forward Logistics Sites

FOC - Full Operating Capability

FOB - Forward Operating Base

FSDS - Fuel Storage and Distribution System

FSO - Full-Spectrum Operations

GATT - general agreement on Tariffs and Trade

GoC - Government of Canada

GPSS - General Procurement Shared Services

HA - Humanitarian Assistance

HADR - Humanitarian Assistance and Disaster Relief

HN - Host Nation

IA - Implementing Arrangement

IOC - Initial Operating Capability

JAWS - Joint Airlift Work Shop (JAWS)

JOSG - Joint Operations Support Group

JTFSC - Joint Task Force Support Command

LO - Liaison Officer

LOCC - Logistics Officer Course - Common (LOCC)

MAAS - Mobile Aircraft Arresting System

MC - Memoranda to Cabinet

MHA - material handling equipment

MINUSMA - Multidimensional Integrated Stabilization Mission in Mali

MLSA - Mutual Logistics Support Arrangements

MNCC - Multi National Coordination Centre

MOU - Memorandum of Understanding

MSF - Mission Support Flight

NAMA - NATO Airlift Management Agency

NAMSA - NATO Maintenance and Supply Agency

NATO - North Atlantic Treaty Organization

NLSE - NATO Logistics Stock Exchange

NEO - Non-Combatant Evacuation

NSPA - NATO Support and Procurement Agency

NSPO - NATO Support and Procurement Organization

NTM-A - NATO Training Missions-Afghanistan

OC MSE – Officer Commanding – Mission Support Element

OLSP - Operational Logistics Support Partnership

OUP - Operation Unified Protector

PSPC - Public Services and Procurement Canada

PWGSC - Public Works and Government Services Canada

RCAF - Royal Canadian Air Force

RCN - Royal Canadian Navy

SA - Supply Arrangements

SACC - Standard Acquisition Clauses and Conditions

SEOS - Surface Exchange Of Services

SJS DGS - Strategic Joint Staff Director General Services

SLOC - Strategic Lines of Communication

SO - Standing Offers

SOW - Statement of Work

STANAG - Standardization Agreement

UN - United Nations

UNSCR - United Nations Security Council Resolution

U.S. - United States

UOR - Urgent Operational Requirement

LIST OF FIGURES

Figure 1.1 – Theatre Activation and Theatre Opening	14
Figure 1.2 – Support-Related Processes Surrounding Theatre Activation.....	15

LIST OF TABLES

Table 2.1 – Operation <i>Mobile</i> Timeline (March 2011).....	20
Figure 2.2 – Operation <i>Renaissance</i> Timeline (November 2013).....	26

ABSTRACT

The CAF has not always been successful in securing assets, equipment and services in order to deploy personnel as well as secure and manage pre-arranged contracts across the globe in preparation for military operations. Changes in Canadian defence policies have pressed the expectation for CAF members to deploy in response to announcements of military response almost immediately after the political commitment has been made. They are then expected to commence operations in the new theatre of operations within a short timeframe in order to achieve the political and strategic objectives; often prior to the completion of theatre activation and opening activities.

These continually advancing demands of time and space have caused a gap in the CAF's ability to arrive in a more succinct fashion and be adequately prepared to commence operations once in theatre. This paper will argue that in order to achieve the strategic and political requirements and visibility of the Canadian military as a quick and agile responder to expeditionary operations across the globe, the CAF needs to be willing to rely more on external organizations and processes. Through analyzing examples of recent CAF operations, this paper demonstrates that utilizing external sources for cooperative support does not hinder, but actually increases timely, flexible, and efficient logistics during the theatre activation and opening activities.

This external support, although it may come in the form of assistance from other nations forming part of internal agreements and arrangements, will ultimately help support the intent of Canada's Foreign Policy of being more agile, responsive and present in the face of requests for expeditionary operations. This push towards more reliance on partner nations and increased preparedness not only assists with achieving Canada's

military objectives of being responsive and strengthening its ties with other countries, it also furthers National strategic and political goals for Canada on the world stage; a win on all fronts.

INTRODUCTION

The deployment of military forces in terms of both personnel and equipment across the globe is nothing new. Sending sailors, soldiers and aviators off to lands of unknown in order to render assistance to a coalition or allied force has been an ongoing practice for centuries. What *has* changed, however, is the speed with which we conduct these actions and expect our military forces to be prepared to conduct operations.

Militaries today are expected to deploy in response to announcements of military assistance and cooperation almost immediately after the political commitment has been made, and they are expected to commence operations in the new theatre of operations sometimes within days of arrival. With the onset of the information age facilitating the extension of both military strategic and political reach, the expectations relating to speed and time have invariably changed. Timelines within which militaries are expected to respond to the furthest spots around the world as well as be ready to conduct operations in the new battle space have shortened. A better understanding of the reasons behind these changes can be gained through reviewing Canada's Foreign Policy in Defence over the past several decades.

The promise within each new Canadian Foreign Policy to deploy forces more swiftly and efficiently into theatres of operation than the preceding policy reshaped the way that the Canadian Armed Forces (CAF) operated and reacted to issues both at home and abroad. Up until the mid-1990's, CAF members stationed at European static bases allowed for a quick reaction of forces in response to transatlantic threats. As the tensions of the Cold War subsided during this same time period, however, the decision was made to reduce the presence of CAF members assigned to Allied Command Europe and to

focus more outward to global requests; focusing on operations that were geographically-dispersed and primarily coalition-based.¹ The 1994 White Paper on Defence shifted the CAF focus to more expeditionary operations by including the promise to maintain a capability to immediately and effectively respond to terrorist incidents.² Since then, Canadian defence policies have echoed this expectation to respond expeditiously, which in turn prompted the creation of a group of logistics professionals at the operational level responsible for the quick deployment and theatre activation and opening activities during the initial stages of an operation: the Joint Task Force Support Command (JTFSC).³

The CAF has not always been successful in securing assets, equipment and services in order to deploy personnel as well as secure and manage pre-arranged contracts across the globe in preparation for military operations. The time has arrived, therefore, where the current instinctual reliance on internal capabilities is no longer responsive enough to the continually advancing demands of time and space. The current *modus operandi* such as defaulting to using CAF platforms for strategic airlift and the bureaucratic timelines and limitations that enacting or calling up a contract in a foreign country will allow leave a gap in the CAF's ability to arrive in a more succinct fashion and be adequately prepared to commence operations once in theatre.

In essence, the CAF needs to ensure that adequate equipment is available by a dependable means in required theatres of operation in order to be able to ramp up

¹ Department of National Defence, B-GJ-005-000/FP-001, *Canadian Forces Joint Publication 1,0, Canadian Military Doctrine*, 1st ed (Ottawa: DND Canada, 2009), 4-1.

² Department of National Defence, *1994 White Paper on Defence* (Ottawa: DND Canada, 1994), 12.

³ Although the Strategic Joint Staff Director General Services (SJS DGS) Strategic J4 cell is responsible for the strategic level activities surrounding theatre activation, theatre opening activities as conducted by the JTFSC can be conducted in conjunction with theatre activation. This will be detailed more in Chapter 1.

operations almost immediately. This expectation of quicker response directly affects the logistics professionals who are responsible for the deployment of military assets as well as the activation of the theatre in preparation for the conduct of operations. Responsible for the deployment of personnel and equipment, they must ensure that this task is done within the time and space expectations set out by the political masters and must ensure that theater activation is done enough in advance to ensure efficiency in standing up imminent operations.

This paper will argue that in order to achieve the strategic and political requirements and visibility of the Canadian military as a quick and agile responder to expeditionary operations across the globe, the CAF needs to be willing to rely more on external organizations and processes.

To come to this conclusion, Chapter 1 will first discuss the evolution of military operations and logistics and how changes in Canada's Defence policy over the past 50 years have changed not only the nature of military operations, but more specifically, tasks in the realm of logistics when it comes to the deployment of forces. It will also expand on the author's assumptions and conclusions that CAF military operations will continue to include more of the agile, expeditionary type of operations as Canada moves into the future.

Chapter 2 will be comprised of four case studies of military operations occurring over the past nine years, including Operation *Mobile* (2011), Operation *Renaissance* 13-0 (2013), Operation *Reassurance* (2014), and Operation *Presence* (2018), where examples of gaps in both the deployment and theatre activation and opening processes will be highlighted.

Chapter 3 will explore CAF doctrine to better understand the factors to consider when planning the deployment of forces and follow-on theatre activation and opening activities. This chapter will explore the ten “principles of war” to be referenced when applying military power, along with other deployment planning considerations such as Time and Space, Destination and Distance and Strategic Transport Assets in order to identify how they support the requirement to extend beyond the CAF’s internal processes to accomplish the mission more effectively. This will be supported by examining how the benefits of reach and speed of CAF strategic assets are offset by limitations caused by their support dependency faced during the initial deployment and theatre activation and opening activities; proving that there is a gap that can be filled by reaching to external sources.

Chapter 4 will expose a variety of organizations external to the CAF and the Department of National Defence that could be leveraged to provide adequate solutions that would close the current gap that exists during the initial deployment of personnel and equipment. These organizations and processes include the North Atlantic Treaty Organization (NATO) Support and Procurement Agency (NSPA),⁴ Defence Logistics Support and Services Standing Offers (DLSSO), Mutual Logistics Support Arrangements (MLSA),⁵ and Acquisition and Cross-Servicing Agreements (ACSA).⁶ It will then use the case studies from Chapter 2 to demonstrate how certain external processes and organizations could be leveraged by the CAF for inclusion in future operations during the

⁴ NATO Support and Procurement Agency, “Logistics Operations,” last accessed 2 February, 2019, <https://www.nspa.nato.int/en/organization/Logistics/logistics.htm>

⁵ Department of National Defence, “Interim Policy Direction – Mutual Logistics Support Arrangements,” (RDMIS #42947814) (Ottawa: DND, 7 August 2012), 1.

⁶ N.K. Mensah, “The Efficacy of Canadian Armed Forces Contracted Support in Expeditionary Operations,” (Joint Command and Staff Programme Directed Research Paper: Canadian Forces College, 2014), 38.

preparation for theatre activation and opening activities and prior to the arrival of the JTFSC.

This paper will conclude with a summary of the findings made throughout the research process and will also include recommendations on how the CAF can move forward in ensuring that external sources are considered during deployment planning as well as during theatre activation and opening activities.

In summary, as the changing expectations relating to time and space have necessitated a balance between effectiveness and efficiency, this paper will show that the CAF needs to explore further options available to Canada through external agencies and processes in order to better support the logistics specialists on the ground to prepare for imminent operations within a constricted period of time. This support, although it may come in the form of assistance from other nations forming part of internal agreements and arrangements, will ultimately help support the intent of Canada's Foreign Policy of being more agile, responsive and present in the face of requests for expeditionary operations.

Author's Experience

The author's career and experiences as a transportation and air movements officer for the past 15 years will be leveraged in this paper. Specific to expeditionary operations, the author held various positions within 2 Air Expeditionary Wing (both at home and abroad) such as the Officer Commanding the Mission Support Element (OC MSE) as well as the Mission Support Element (Training), and the A4 Logistics at 2 Wing headquarters. In deployed settings, the author held positions of Logistics Senior Mentor of the Afghan Border Police (ABP) with the NATO Training Missions-Afghanistan (NTM-A) during Operation *Attention* in Afghanistan from November 2012 to July 2013,

the A4 Logistics and OC MSE of the Air Task Force deployed with the Disaster Assistance Response Team (DART) during Operation *Renaissance* 13-1 in the Philippines from November to December 2013, and the OC MSE for the Joint Task Force of Operation *Reassurance* in Romania from May to July 2014. The most recent deployments were both during the theatre activation and opening phase (Rotation 0) and therefore the author had the experience of being one of the first personnel in the theatre of operations and/or was immediately connected to those responsible for the enactment of prescribed contracts and agreements, experiencing the gaps in the system first-hand. This provided significant foundational knowledge of how current Royal Canadian Air Force (RCAF) and joint operations are conducted in the initial stages and the challenges that are faced from a logistics perspective.

Conclusion

The changes in time and space considerations of CAF forces resulting from shifts in Canada's Foreign Policy on Defense over the years has changed the way that the initial stages of operations are expected to be conducted. There exists a greater need to ensure that adequate equipment is available in required theatres of operation in order to be able to ramp up operations almost immediately. As various CAF operations have shown, capability gaps exist within the initial stages of deployment and theatre activation and opening activities. As operations and Canada's commitment to them continue to grow in number, the CAF must ensure that it is examining the best way to ensure effective and efficient operations, which includes relying more on external processes and organizations that, although may not be Canadian, will allow for a greater Canadian strategic and political effect on the ground.

CHAPTER 1 – EVOLUTION TOWARDS EXPEDITIONARY OPERATIONS

The line between disorder and order lies in logistics.

– Sun Tzu, *The Art of War*

Although the time period between Clausewitz and the Canadian Armed Forces (CAF) in today's day and age extends over hundreds of years, the relationships between militaries and political objectives as well as with the effect that issues of logistics have on the overall mission success have transcended time. As Canada's political and strategic requirements shift focus over time, so do the mission sets and response timelines directed to the CAF for domestic and international missions. Canada's push towards expeditionary military operations can be evidenced by examining the differences between the defence reviews conducted over the past half century, although its permanent posture across the globe has been reduced significantly over the past few decades.

This chapter will examine how the CAF's mandate has changed over time and will take a closer look at what exactly the term "expeditionary operations" means. As Canada continues to push the CAF towards expeditionary operations, it's important to understand the definition as pre-ambule to the further discussions to be had in this paper, and to understand why the author believes that this this type of operation will continue as the CAF moves into the future.

Military Operations and Logistics

Clausewitz was an innovator of thought for being one of the first to communicate the clear relationship between the will of a nation's leaders and the act of waging war. He wrote that "the political object—the original motive for the war—will thus determine

both the military objective to be reached and the amount of effort it requires.”⁷ He was also known to have shared revelations on logistics and how logistic matters were directly related to the operational goals, if not also the strategic goals. In *On War*, he stated that “questions of supply can exert on the form and direction of operations, as well as the choice of a theatre of war and the line of communication.”⁸

In expeditionary operations⁹ of today’s militaries, Clausewitz’ words still resound in the planning considerations of critical logistic requirements at all levels of conflict¹⁰. The availability of equipment, the readiness of military personnel and the capabilities available across the CAF to enact expeditionary operations can directly affect the type or *direction* of operations, be it in the realm of a Non-Combatant Evacuation (NEO), Humanitarian Assistance and Disaster Relief (HADR), other Domestic Operations (Dom Ops), or even Full-Spectrum Operations (FSO). Given the nature of these operations and the nexus requirement to be expeditionary, the effect that logistics has on the line of communication, or means by which personnel are deployed into to the Theater of Operations, is directly related to the outcome of analyzing the planning factors

⁷ Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1984), 119.

⁸*Ibid*, 338.

⁹ The term “Expeditionary Operations” is defined as “An operation that requires the projection of military power over extended lines of communications into a distant operational area to accomplish a specific objective.” Termium Plus, “Expeditionary Operations,” last accessed 28 April 2019, http://www.btb.termiumplus.gc.ca/tpv2alpha/alpha-eng.html?lang=eng&i=1&srchtxt=expeditionary+operation&index=alt&codom2nd_wet=1#resultrecs

¹⁰ The four levels of conflict are defined as follows: a. **National strategic** is the level where the nature and quantity of a country’s resources dedicated to achieving national policy objectives are determined by the political leadership. b. **Military strategic** is the strategic level is where military strategic goals consistent with the desired national policy end state of a conflict are determined. c. **Operational** is the level that links the military strategic and tactical levels and where major operations are planned, conducted, and sustained, to accomplish military strategic goals. d. **Tactical** is the level where battles and engagements are planned and conducted. Department of National Defence, B-GJ-005-000/FP-001, *Canadian Forces joint Publication 1,0 . . .*, 2-11.

surrounding the delivery of people and equipment into theatre in order to commence operations.

Canada and Expeditionary Operations

In Canada's case, military action and forces have become increasingly important since the passing of the National Defence Act in 1922 and the ever-increasing participation and success in more modern-day operations since the First and Second World Wars. Since then, Canada has continued to grow in expertise and military strategy, and, although a middle power, continues to play an important role on the main stage of global affairs.

During and after the First and Second World Wars, Canada's focus shifted outward to a role of active participation in the foundation of several influential organizations across the globe. Canada played a noteworthy role in the General Agreement on Tariffs and Trade (GATT), the universal declaration of Human Rights, the creation of the North Atlantic Treaty Organization (NATO), as well as in the induction of peacekeeping within as well as outside of the United Nations (UN).¹¹

Although the Cold War saw Canada's armed forces focus on the protection of "Canadian and NATO territory against armed aggression by the Warsaw Pact,"¹² its end in 1991 led to a redefinition of Canada's security agenda, focusing now on "terrorism; international crime; disease; environmental issues; and intra-state ethnic, cultural, and religious violence."¹³ This change in focus forced the Canadian Armed Forces (CAF) to realign its structure given that the nature of the above-mentioned operations were

¹¹ Department of National Defence, B-GJ-005-000/FP-001, *Canadian Forces Joint Publication 1,0* . . . , 4-1.

¹² *Ibid.*

¹³ *Ibid.*

geographically-dispersed and primarily coalition-based, which required “an unparalleled degree of expeditionary capability and interoperability with key allies.¹⁴” Although military power is but one of the principal instruments of national power and is “primarily used in conjunction with the other instruments of national power and as a measure of last resort,”¹⁵ the CAF is increasingly being called upon to ensure safe environments and the provision of services for populations that find themselves in countries where civil societies have collapsed.¹⁶

Canada’s push towards reacting to outward, or expeditionary, military operations can be evidenced by examining the differences between the defence reviews conducted over the past half century. The 1971 White Paper on Defence is largely focused on the established bases in Germany, where the number of military personnel assigned to Allied Command Europe was not to exceed 5,000 members. It also outlined at length Canada’s commitment to NATO, explaining each circumstance in which would have been required to intervene as part of a coalition or allied force.¹⁷ In the 1994 White Paper on Defence, Canada committed to maintaining a prudent level of military force to “participate effectively in multilateral peace and stability operations and, if and when required, in the defence of North America and [its] allies in Europe, and in response to aggression elsewhere,”¹⁸ including maintaining a capability to immediately and effectively respond to terrorist incidents.¹⁹ This shift to more expeditionary operations and the clearly identified requirement for an effective and timely response is echoed in the 2010

¹⁴ Department of National Defence, B-GJ-005-000/FP-001, *Canadian Forces Joint Publication 1,0* . . . , 4-1.

¹⁵ *Ibid*, 2-2.

¹⁶ Department of National Defence, *1994 White Paper* . . . , 12.

¹⁷ *Ibid*.

¹⁸ *Ibid*,3.

¹⁹ *Ibid*, 4.

Canadian First Defence Strategy (CFDS) whereby key phrases such as “credible player on the world stage” and “meaningful contribution across the full spectrum of international operations, from humanitarian assistance to stabilization operations to combat” are used.²⁰ The latest defence policy published in 2017, *Strong, Secure, Engaged* also places increased importance on expeditionary capabilities in order to support national interests and international objectives.²¹

Although the CAF has proven to be successful over the years at following doctrine to ensure the effective sustainment of operations at the strategic, operational and tactical levels, the commitment to be more responsive to conflicts and requests for assistance around the world causes a heightened requirement for theatre activation and opening activities²² to be quicker and more efficient than in the past. An article published by the *Journal of the Operational Research Society* envisions the upward trend to continue in that “the frequency of demands for international aid is likely to increase, and the Canadian Forces (CF) will continue to be a major contributor to these efforts.²³” Given that the deployment and sustainment of overseas operations is complex and require a high level of logistics support, an increase in frequency and speed with which the CAF will respond globally requires that theatre activation and opening processes and procedures

²⁰ Department of National Defence, *Canada First Defence Strategy* (Ottawa: DND Canada, 2008), 9.

²¹ Department of National Defence, *Strong, Secure, Engaged* (Ottawa: DND Canada, 2017).

²² Theatre activation is defined as: “The diplomatic, operational planning, and support activities required to shape an operation and prepare the theatre for the conduct of operations. It includes intelligence gathering, liaison with multinational staff, diplomatic engagement, arranging host-nation agreements, and theatre opening.” Department of National Defence, B-GL-005-004/FP-001, *Canadian Forces Joint Publication 4-0, Support*, 1st ed. (Ottawa: DND Canada, October 2016), 6-1.

²³ A. Martel, A. Benmoussa, M. Chouinard, W. Klibi, and O. Kettani, “Designing Global Supply Networks for Conflict or Disaster Support: The Case of the Canadian Armed Forces,” *Journal of the Operational Research Society* 64 (2013): 577.

must be *turn-key* solutions that can be enacted within each new theatre of operation by logistics professionals

The responsibility for theatre activation and opening activities rests with the Canadian Joint Operations Command (CJOC), who has delegated the task to the Joint Operations Support Group (JOSG) to produce a Joint Task Force Support Command (JTFSC) for all joint operations.²⁴ As the JTFSC is the centre of excellence for theatre activation and opening activities, certain smaller groups can find themselves in theatre in a non-joint construct without JTFSC support or sometimes prior to JTFSC enacting their contracts and agreements. In these cases, groups find themselves in a position whereby they must perform certain tasks of theatre activation and opening activities for a finite period of time, but without the experience or knowledge required. As an example, the Canadian Special Operations Forces (CANSOF) organization does not utilize JTFSC for theatre activation and opening activities as they Force Employ (FE) their own forces.²⁵

However, even organizations that are Force Employed by CJOC, but that find themselves in a non-joint construct that deploys without joint forces or prior to a theatre of operations becoming a joint theatre, find themselves responsible for theatre activation and opening activities for their specific element without the expertise that the JTFSC brings to the table. This includes 2 Air Expeditionary Wing (2 AEW), the Royal Canadian Air Force's (RCAF) air expeditionary capability, whose "mandate is to command, control

²⁴ Department of National Defence, B-GL-005-004/FP-001, *Canadian Forces Joint Publication 4-0* . . . , 2-18.

²⁵ Department of National Defence, *Canadian Forces Joint Operational Support Group Headquarters – Joint Task Force Support Command Concept* (Ottawa: DND Canada, 2010), 4.

and enable expeditionary air operations, which inherently includes establishing, activating and supporting an air base and air capability.”²⁶

Although Canada has conducted operations in the post-Cold War era, experts in the military field of study have noted that “the [CAF’s] response to individual crises has generally been *ad hoc*”²⁷ in that “Canada’s military has not specifically prepared for expeditionary operations.”²⁸ Chapter 2 will outline several operational examples whereby the CAF’s immediate response to expeditionary operations caused gaps in the support requirements for theatre activation and opening activities, demonstrating that, although Canada meets its strategic and political goals, the operational and tactical levels still have a lot of room for improvement.

Definitions in the Context of this Paper

Prior to proceeding with discussions surrounding gaps and potential improvements to how the CAF conducts the support requirement preparations of “theatre activation” and “theatre opening” for “expeditionary operations,” it is important to introduce and develop a few definitions so as to understand the meaning as it will be utilized throughout this paper.

Given the close definitions of theatre activation²⁹ and theatre opening,³⁰ it is important to understand that theatre activation is the overarching activity within which

²⁶ Department of National Defence, B-GA-402-005/FP-001, *Royal Canadian Air Force Doctrine* . . . , 1-1.

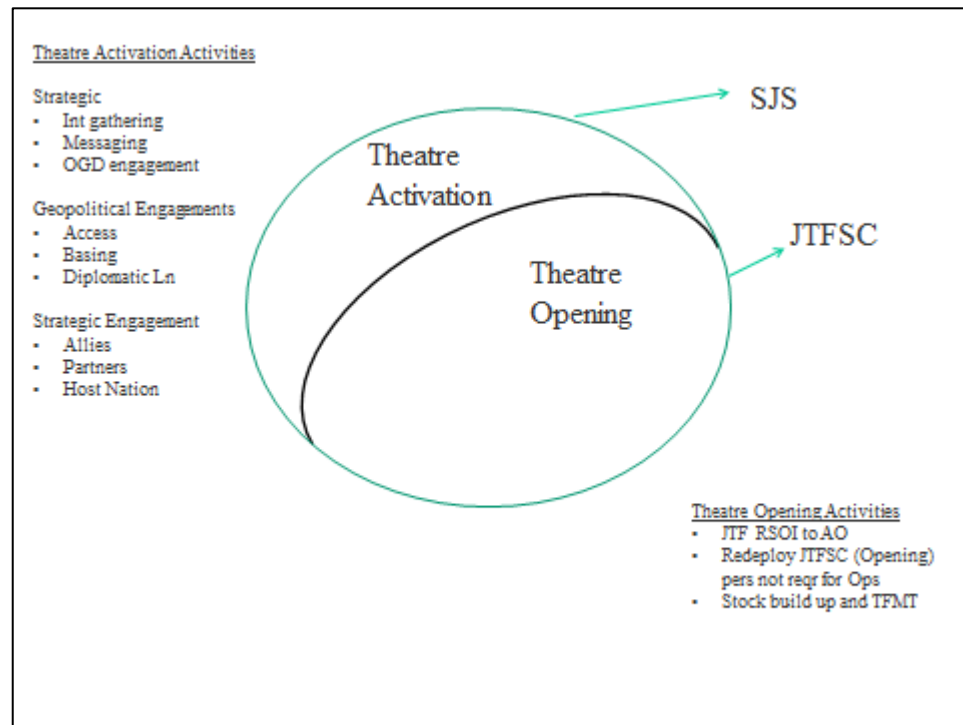
²⁷ Richard Gimblett, “The Canadian Way of War: Experience and Principles,” paper presented to the Seapower Conference 2002, Dalhousie University Halifax, NS, 8 June 2002, 4.

²⁸ Richard Goette, “Command and Control Implications for Canadian Forces Air Expeditionary Operations,” paper presented to the Air Symposium, Trenton, Ontario, 2003, 3.

²⁹ Theatre Activation is defined as “The diplomatic, operational planning and support activities required to shape an operation and prepare the theatre for the conduct of operations.” Defence Terminology Bank (DTB), “Theatre Activation,” last accessed 29 April 2019, http://www.btb.termiumplus.gc.ca/tpv2alpha/alpha-eng.html?lang=eng&i=1&srchtxt=theatre+activation&index=alt&codom2nd_wet=1#resultres.

theatre opening activities will occur. Figure 1.1 shows a pictorial representation of the relationship between theatre activation and opening, as well as identifying the responsible organization and some examples of associated tasks.

Figure 1.1 – Relationship Between Theatre Activation and Opening Activities



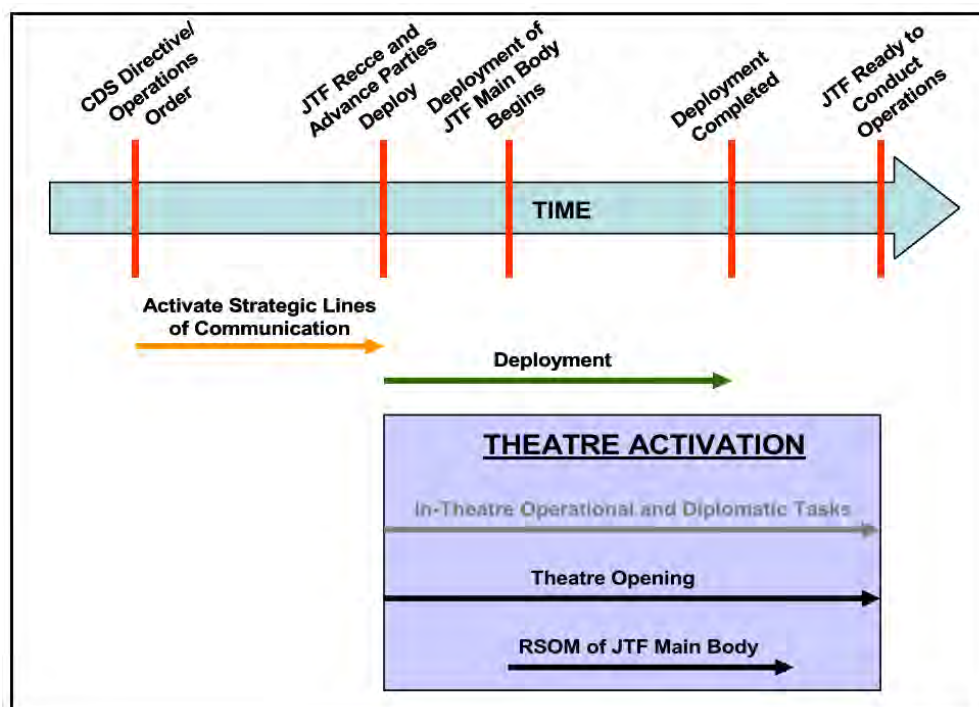
Source: T. O’Shea and G. Priems, Canadian Forces Operational Support Group, “Theatre Opening and Closing Operations,” power point presentation, slide 9, 2016.

As certain activities of theatre activation can still be ongoing during the theatre opening phase, for the purposes of this paper, the term “theatre activation and opening activities” will be the blanket term used to refer to activities that may occur either category, rather than trying to delineate in which category the activity best fits. Figure 1.2

³⁰ “In the context of theatre activation, the establishment of the theatre support structure required for the deployment and sustainment of the force. The theatre support structure consists of all materiel, infrastructure, services, and arrangements.” Defence Terminology Bank (DTB), “Theatre Opening,” last accessed 29 April 2019, http://www.btb.termiumplus.gc.ca/tpv2alpha/alpha-eng.html?lang=eng&i=1&srchtxt=theatre+opening&index=alt&codom2nd_wet=1#resultrecs.

shows the support-related processes involved in the buildup stage of an operation, including the activities comprising theatre activation.

Figure 1.2 – Support-Related Processes Surrounding Theatre Activation



Source: Department of National Defence, B-GL-005-004/FP-001, *Canadian Forces Joint Publication 4-0, Support*, 1st ed. (Ottawa: DND Canada, October 2016), 6-3.

Defining “expeditionary operations” proves to be a bit more challenging, as “the term is not common in Canadian Forces’ (CF) doctrine and Department of National Defence’s policy or strategy documents.”³¹ This lack of consistency causes variant definitions across academic readings such as Gimblett’s definition stating it is “The application of Canadian military force beyond our territorial limits,”³² and Goette’s definition stating it is “The deployment of Canadian Forces’ (CF) resources outside of

³¹ Thierry Gongora, “The meaning of Expeditionary Operations from an Air Force Perspective,” paper presented to the Seapower Conference 2002, Dalhousie University Halifax, NS, 7-9 June 2002, 2.

³² Richard Gimblett, “The Canadian Way . . .”, 4.

Canadian territory into a foreign country or foreign territory for the purpose of accomplishing a specific objective” by combining definitions by Gimblett and Gongora.³³ The definition that will be used for the purpose of this paper will be a combination of that of Goette with the added stipulation used by the 32nd Commandant of the Marine Corps, General James L. Jones that “Such a force must be able to deploy rapidly [and] sustain itself for an extended period of time.”³⁴

This distinction and focus on the deployment agility of the force is specific to the tone of the paper in that the majority of the operations discussed and examples used pertain to the quick activation and deployment of forces in response to the political and strategic demands made in times of crisis or in response to UN Security Resolutions requiring immediate action. The focus of this paper is on the period of time between when the official decision is made for CAF involvement (to be referred to as “D-Day”) up until the time when a stable sustainment plan is in place for the duration of the mission.

In evaluating the history of Canada’s involvement in operations, and the continued push towards additional expeditionary operational involvement as per the most recent Defence Policy discussed in this chapter, the author is basing this paper on the assumption that the CAF will continue to be engaged in expeditionary operations that will require a quick and agile response to areas across the globe where there is not already sufficient equipment or service available for immediate use. This assumption is reinforced by Fergusson, who openly believes that the CAF will continue with expeditionary operations in stating “The willingness of Canadian decision-makers to engage overseas is

³³ Richard Goette, “Command and Control . . .”, 1.

³⁴ General James L. Jones, “What’s in a Word? ‘Expeditionary Means More than Just Getting There Quickly,” *Armed Forces Journal International* 138, no. 3 (October 2000), 60 in Thierry Gongora, “The meaning of Expeditionary . . .”, 3.

driven by the inter-relationship of several political motives: influence, prestige, ethics, domestic politics, and an unchallenged national image of Canada's 'good-guy' role on the international stage."³⁵

Conclusion

Although defined differently by various experts in the field of military studies, Canada's push towards expeditionary operations can be evidenced by examining the evolution evidenced in the defence reviews over the past half century. Views like Clausewitz on the link between political and military objectives still resounds in writings today and the importance of logistics in military operations becomes increasingly important with the rise of expeditionary operations. Although the CAF has been responsive to expeditionary operations, criticisms still resound regarding not being prepared and the failure to properly plan for them.

With a more specific definition of what expeditionary operations means in the context of this paper, Chapter 2 will show supporting evidence in line with some of the criticisms discussed in this chapter and will outline operational examples whereby the CAF has demonstrated clear gaps in the support requirements for theatre activation during expeditionary operations.

³⁵ James Fergusson, "Over There, From Here: Expeditionary Forces and the Canadian Air Force," paper presented to the Air Symposium, Trenton, Ontario, 2003, 3.

CHAPTER 2 – GAPS IN THEATRE ACTIVATION AND OPENING ACTIVITIES - CASE STUDIES

Victory is the beautiful, bright-coloured flower. [Sustainment] is the stem without which it could never have blossomed. Yet even the military student, in his zeal to master the fascinating combinations of the actual conflict, often forgets the far more intricate complications of supply.

– Winston Churchill, *The River War*³⁶

Although Canada has risen its global promise of deploying forces more swiftly and efficiently into Theatres of Operations, the risk that it presents is the strategic and political objectives not only compromising the support concept of the operation, but also the integrity of the mission itself. Although the importance of logistics and support considerations was shown to be of utmost importance in Chapter 1, they are still not taken into enough consideration in the planning phases of military expeditionary operations.

This chapter will examine several operations and will identify gaps in both the deployment and theatre activation and opening processes in order to show how, despite the complexity of the theatre of operations, the strategic operational objectives of getting “boots on the ground” or “bombs on target” are often prioritized above the requirements of ensuring that a proper theatre support system is in place prior to conducting operations in a properly provisioned manner. During Operation *Mobile*, the Mission Support Flight (MSF) did not have protected time prior to the actual deployment of forces to conduct theatre opening activities. During Operation *Renaissance* 13-1, the processes normally used for contracting fuel were inadequate to supply required Aviation Petroleum, Oil and Lubricant (AvPOL) in time for planned humanitarian assistance operations. During Operation *Reassurance*, the drive to commence “show of force” operations outweighed the need to ensure that the support footprint was well established beforehand. In these

³⁶ Winston Churchill, *The River War*, Revised Edition (London: Longmans Green, 1902), 162.

small case studies, it is apparent that, although CAF doctrine outlines principles of war that can greatly enhance and ease the flow and sustainment of an operation, the objectives set out at the higher headquarters to be seen as quick and agile responders across the globe outweighs the time factor that would be required that adhering to these principles from the onset would require.

This chapter is a pre-cursor to Chapter 4, where several external organizations and processes that could be leveraged by the CAF for inclusion in future operations will be examined and applied to the case studies set out in this chapter.

Operation *Mobile* – Libya, March to November 2011

Operation *Mobile* was the Canadian contribution to the North Atlantic Treaty Organization (NATO)-led coalition Operation *Unified Protector* (OUP) in March of 2011.³⁷ Although the mission was considered a grand success for Canada by some to be “one of the Royal Canadian Air Force’s (RCAF) most successful deployments,”³⁸ largely due to the high percentage of Canadian combat missions throughout the campaign, it was also considered a grand success for Canada in that, “With respect to Canada’s place in the international community, Canada demonstrated its worth as an ally, contributing both operational capacity and leadership.”³⁹

The speed with which the Canadian Armed Force (CAF), and more specifically the RCAF, responded to the government’s order to deploy was a considerable factor in ensuring that Canada stood out as being capable to react to a mission half way across the

³⁷ Department of National Defence, “End Tour Report - Task Force Libeccio,” 1630-1 (Comd TF LIB) (Ottawa: DND, 7 November 2011), 1.

³⁸ Richard Oliver Mayne, and William March, “Air Wing: RCAF Commanders’ Perspectives During the 2011 Libyan Conflict,” (Ottawa: Canadian Forces Aerospace Warfare Centre Production Section, 2018), v.

³⁹ Rachael Bryson *et al*, *Canada in Libya: Strategic Lessons Learned* (Ottawa: Defence Research & Development Canada, 2012), iv.

globe. Less than a day after the passing of United Nations Security Council Resolution (UNSCR) 1973,⁴⁰ seven CF-188 fighters and two CC-150T tanker aircraft were en-route to join the operation. Less than 48 hours after their arrival, the mission had been declared at Full Operating Capability (FOC) and combat missions were already being flown.⁴¹ Figure 2.1 depicts the timeline for the operation, denoting key CAF events between 17 and 28 March 2011.

Table 2.1 – Operation *Mobile* Timeline (March 2011)

Event Date	D-Day	D+1	D+3	D+6	D+7	D+10
17	18	19	21	24	25	28
UNSCR 1973	CAF assets en-route	CAF assets arrive	FOC	MSF Arrives	Additional CAF platforms arrive	Additional operations Commence

Source: Department of National Defence, “End Tour Report - Task Force Libeccio,” 1630-1 (Comd TF LIB) (Ottawa: DND, 7 November 2011), 1.

The agility and readiness with which the mission had rapidly advanced into the employment phase was highly commendable, especially considering that just 48 hours prior to the passage of the UNSCR, there was still an exorbitant amount of uncertainty as to whether the CAF would be involved in the operation in Libya and, if so, in what capacity.⁴² The factor of speed was so impressive given the distance that the aircraft had to travel that the Minister of National Defence, Peter MacKay said to the House of Commons: “We are fortunate to have an air force with capabilities ... that takes mere

⁴⁰ UNSCR 1973 is the Resolution passed in March 2011 recalling its resolution 1970 passed in February 2011 and deploring the failure of the Libyan authorities to comply with said resolution. UNSCR 1973 also expressed grave concern at the deteriorating situation, the escalation of violence, and the heavy civilian casualties, and made demands acting under Chapter VII of the Charter of the United Nations. United Nations Security Council, *United Nations Security Council Resolution 1973*, (New York: UN, 2011), 5.

⁴¹ Richard Oliver Mayne, and William March, “Air Wing . . .”, 3.

⁴² *Ibid.*

hours to deploy six [sic] highly sophisticated fighter aircraft and necessary support to depart for a theatre of operations nearly 7,000 kilometres away.”⁴³

While the public could regard the enhanced speed with which the operation was able to reach FOC as positive, the support for the forward elements was slow to catch up.⁴⁴ Due to the accelerated deployment of the air detachments, there was neither a theatre reconnaissance team nor a theatre activation team that had preceded them in order to establish adequate support and sustainment for both the members and their platforms.⁴⁵ As a result of the air detachments deploying so quickly and with their own airframes, the Mission Support Flight (MSF) who was the expeditionary unit appointed to provide support requirements in theatre, were unable to arrive in theater until days after air operations had already commenced.⁴⁶ MSF faced excessive difficulty in providing adequate support capabilities for basic tasks such as administration, supply, contracts and finances. The MSF had such a small initial footprint and was required to support ongoing operations while attempting to establish support requirements for additional personnel and platforms scheduled to arrive in theatre. This inability to “keep up” is highlighted in the Task Force Commander’s End Tour Report where it states that “...the United Kingdom almost cut deliveries of AvPOL to Canada . . . because of unpaid invoices.”⁴⁷

⁴³ House of Commons Debates, Hansard, March 21, 2011; “Statement by Minister MacKay on the Deployment of CF-18s to Enforce No-Fly Zone over Libya,” March 18, 2011 in Richard Oliver Mayne, and William March, “Air Wing . . .”, 7.

⁴⁴ Department of National Defence, “End Tour Report - Task Force Libeccio . . .”, 6.

⁴⁵ *Ibid.*

⁴⁶ Captain Jill Strelief, “17 Mission Support Flight Rolls into Mobile,” Royal Canadian Air Force, October 27, 2011; Alain Pelletier, “Canadian Forces: Op Mobile Lessons Observed, Brief,” TFL Lessons Learned Symposium, June 6, 2012, Winnipeg, Manitoba in Department of National Defence, “End Tour Report - Task Force Libeccio . . .”, 9.

⁴⁷ Department of National Defence, “End Tour Report - Task Force Libeccio . . .”, 7.

The challenges were exacerbated due to the widespread layout of the Task Force. In particular, air detachments containing CC-177 Globemasters, CC-130T Hercules tactical refueling aircraft, CC-150T Polaris strategic refueling aircraft, CP-140 Aurora Long Range Patrol aircraft and CF-188 Hornet fighter aircraft were spread between Trapani and Sigonella,⁴⁸ which are located on opposite coasts of the 300Km wide island of Sicily, as well as Poggio Renatico, which is situated on the Northern tip of mainland Italy, more than 1,400Km from Sicily.⁴⁹

Although current doctrine requires theatre activation and opening personnel to be present in theatre in order to properly assess infrastructure and equipment and to be able to properly assess local vendors for real life support contracts,⁵⁰ the nature of the quick deployment of Operation *Mobile* did not allow for these tasks to be completed between the reception of the Warning Order on D-Day⁵¹ and the declaration of FOC on D+3.⁵² As a result, when MSF members arrived in theatre after D+5,⁵³ they were unable to dedicate the necessary time required to complete the tasks required for the long term sustainment of the mission as they were still trying to delineate the requirements for the immediate support of ongoing flying operations. In addition, two days after their arrival, additional

⁴⁸ Department of National Defence, “End Tour Report - Task Force Libeccio . . . , 9.

⁴⁹ Department of National Defence, “AAR - Theatre Activation Team Task Force Libeccio,” 3350-1 (TAT Comd) (Ottawa: DND, 17 May 2011) in N.K. Mensah, “The Efficacy of . . . , 38.

⁵⁰ Department of National Defence, B-GL-005-004/FP-001, *Canadian Forces Joint Publication 4-0, Support*, 1st ed. (Ottawa: DND Canada, October 2016), 6-5.

⁵¹ Richard Oliver Mayne, and William March, “Air Wing . . . , 8.

⁵² Department of National Defence, “End Tour Report - Task Force Libeccio . . . , 1

⁵³ Captain Jill Strelief, “17 Mission Support Flight Rolls into Mobile,” Royal Canadian Air Force, October 27, 2011 and Alain Pelletier, “Canadian Forces: Op Mobile Lessons Observed, Brief,” TFL Lessons Learned Symposium, June 6, 2012, Winnipeg, Manitoba in Department of National Defence, “End Tour Report - Task Force Libeccio . . . , 9.

personnel and platforms arrived in theatre, ready to conduct operations as early as D+10.⁵⁴

This case study gives a “behind the scenes” look at the repercussions and effect on the mission of not allowing the MSF to have protected time prior to the actual deployment of forces to conduct theatre opening activities. It shows how CAF doctrine was not followed and how, despite the complexity of the theatre of operations, the strategic objective of getting “bombs on target” was leveraged above that requirements to ensure that a proper theatre support system was in place prior to conducting operations.

Operation *Reassurance* - ROTO 0 – Romania, May to July 2014

Operation *Reassurance* is Canada’s contribution as part of North Atlantic Treaty Organization (NATO) assurance and deterrence measures based on the principles of defence, deterrence and de-escalation meant to “reinforce NATO’s collective defence and demonstrate the strength of allied solidarity.”⁵⁵ As discussed in Chapter 1, the author had the opportunity to deploy to Campia Turzi, Romania during Roto 0 of Operation *Reassurance* in May 2013. As the theatre in Romania had not yet been officially identified as a part of the official joint operation at the time, the deployed command and control (C2) construct was that of a stand-alone Air Task Force (ATF), and not yet either a joint structure with the naval elements deployed, nor a combined structure under NATO. As such, there was no Joint Task Force Support Command (JTFSC) deployed into theatre and the tactical reconnaissance (recce) occurred only the week prior to the arrival of the advanced party. Although a thorough recce had been completed prior to the

⁵⁴ Department of National Defence, “End Tour Report - Task Force Libeccio . . .”, 1.

⁵⁵ Government of Canada, “Op Reassurance,” last accessed 15 April 2019, <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-reassurance.html>

selection of the camp to be used for operations, there had not yet been any local contracts, arrangements or agreements completed for theatre activation and opening activities.⁵⁶

Upon arriving in theatre with the advance party, the author was required to ensure that local contracts were set up for all logistical and support requirements. Three significant issues posed problems that had to be solved in order to meet the tight timelines of being ready to receive the Canadian fighter jet detachment that were scheduled to start conducting flight training within days of landing in the theatre. These items were the requirement for an Aircraft Rescue and Fire Fighting (ARFF) vehicle, a fuel bladder and Fuel Storage and Distribution System (FSDS) that could sustain planned Canadian fighter jet operations, and the Mobile Aircraft Arresting System (MAAS) required in the case of rapid aircraft recovery. All three of these requirements were essential to being able to meet the Initial Operating Capability (IOC) milestones; which essentially referred to the commencement and sustainment of flying operations.⁵⁷

Although verifications were being made through the Canadian Joint Operations Command (CJOC) for these items through the Canadian supply system, their availability, capacity and serviceability were such that the Canadian equipment could not be relied upon, and surely not in the quick turn-around time that was required in order to commence flying operations according to the detailed timeline.⁵⁸ If the equipment were to be shipped from Canada, the expenses given the weight and volume required for each of the items in a Transportation aircraft such as the CC-177 Globemaster (C-17) would have been extravagant.

⁵⁶ Based on author's personal experiences while deployed to Campia Turzi, Romania, during Roto 0 of Operation Reassurance.

⁵⁷ *Ibid.*

⁵⁸ *Ibid.*

This case study shows how, although verifications for items of high operational importance were being made through CJOC, the presence of Canadian equipment could not be relied upon for a number of reasons. As the Canadian fighter jet detachment was scheduled to start conducting flight training within days of landing in the theatre, a solution with a quick turnaround time was essential in ensuring that the CAF met the strategic and political objectives of allied deterrence with enhanced Baltic Air Policing (BAP) missions.

Operation *Renaissance* 13-1 –Philippines, November to December 2013

Contingency Plan (CONPLAN) *Renaissance* is a CAF rapid response plan providing Humanitarian Assistance and Disaster Relief (HADR) to disasters that occur overseas.⁵⁹ As discussed in Chapter 1, the author had the opportunity to deploy with the Disaster Assistance Response Team (DART) in response to Typhoon Haiyan that caused 6,300 deaths and damaged more than 1.14 million houses across the thousands of islands that make up the Philippines.

Given the quick response nature of an HADR mission, there is little time for a recce or theatre activation and opening team to prepare support and sustainment requirements prior to the arrival of the main body of personnel. In this case, the Government announcement to send CAF support is considered as being D-Day, or 10 November 2013, two days after Typhoon Haiyan struck the Philippines. Figure 2.2 depicts the timeline for the operation, denoting key CAF events between 8 and 28 November 2013.

⁵⁹ Government of Canada, “Operation Renaissance 13-1,” last accessed 9 April 2019, <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/recently-completed/operation-renaissance-13-1.html>

Figure 2.2 – Operation *Renaissance* Timeline (November 2013)

Event Date	D+3	D+5	D+9	D+10	D+13	D+18
8	13	15	19	20	23	28
Typhoon	HART/DART departure	DART Arrives	Helos Arrive	IOC	Intermediate Fuel Contract Ready to use	All DART Material in theatre/Fuel contract Ready for Use

Source: Based on author's personal experiences while deployed to the Philippines during Operation *Renaissance 13-0* and Department of National Defence, "Air Task Force Post Mission Report –OP RENAISSANCE 1301," (Comd ATF-Philippines) (Ottawa: DND, 2014), 1.

On D+3, the reconnaissance team for the DART, the Humanitarian Assistance Reconnaissance Team (HART), deployed from Canada using military strategic airlift⁶⁰ and arrived in theatre, over 13,000Km across the globe, on D+5 in order to commence recce and theatre opening operations.

With portions of the main body scheduled to arrive within days, including the CH-146 Griffon tactical helicopters that were scheduled to deliver medical assistance and Humanitarian Assistance (HA), there was little time to complete a full recce of the availability of airports, fuel and facilities required for the imminent helicopter operations. When the helicopters arrived on D+9, there was a realization that, due to the poor infrastructure and damaged fuel facilities near the Area of Operations (AO), the

⁶⁰ The term "Strategic Airlift" is used for operations conducted between theatres (or inter theatre), Department of National Defence, B-GJ-005-404/FP-040, *Joint Doctrine Manual, Movement Support, Air*. (Ottawa: DND Canada, 2003), 1-2.

helicopters would have to refuel at a Forward Area Refueling Point (FARP) that would also require a separate contracted fuel source.⁶¹

The JTFSC immediately started the contracting process but, due to contracting timeline restrictions and delays caused by a lack of experience specific to RCAF requirements within the JTFSC, fuel would not be available at the FARP prior to D+19.⁶² As helicopter operations were planning to occur on D+10, the day after their arrival into theatre, there was a significant gap in the ability to acquire the required support to conduct operations. As was stressed by the 1st Canadian Division (1 Can Div) J5,⁶³ there was a political and strategic requirement to provide an immediate effect on the ground in the Philippines.⁶⁴

Since the quick acquisition of contracted fuel was an impossibility using the traditional contracting avenue in time for D+10, the author, as the A4 for the operation and responsible for the logistics and support of the ATF, contacted the Multi National Coordination Centre (MNCC) to investigate interim possibilities for fuel acquisition and requested that the Canadian Liaison Officer (LO) in the MNCC investigate the possibility of transferring fuel from coalition aircraft to a Canadian fuel bowser; which would subsequently fuel the helicopters. Over the next 48 hours, the suggestion was implemented and the Canadian fuel bowser received fuel off-loaded from coalition

⁶¹ Based on author's personal experiences while deployed to the Philippines during Operation *Renaissance 13-0* and Department of National Defence, "Air Task Force Post Mission Report –OP RENAISSANCE 1301," (Comd ATF-Philippines) (Ottawa: DND, 2014), 5.

⁶² Public Works and Government Services Canada, "Aviation Fuel: Into-plane refuelling services in the Philippines (W8484-148093/01-GRK30)." Last accessed 23 April 2019, <https://buyandsell.gc.ca/procurement-data/award-notice/PW-13-00539801-001>

⁶³ J5 is the Acronym for the Joint representative responsible for plans within an organizational headquarters.

⁶⁴ Department of National Defence, "OP RENAISSANCE 13-01 Lessons Learned Report," 3350-OP RENAISSANCE (CFWC A&LL) (Ottawa: DND, 5 February 2014), A-2/15.

aircraft, which ultimately enabled HADR operations within days of the platforms arriving on-ground. They were able to conduct helicopter operations in support of HADR missions starting on D+10, as the Canadian fuel bowser was filled via coalition aircraft on D+11 and D+12, with an intermediate contract coming into effect on D+13 as an interim solution for the Standing Offer call-up contract which would be ready on D+19⁶⁵.

Given the immediacy of the requirement for HADR at such a far distance from Canadian soil, little time is left for allowing extensive reconnaissances and theatre opening activities prior to the commencement of operational activities. Although there was a political and strategic requirement to provide an immediate effect on the ground in the Philippines, the distance allowed for concurrent theatre opening activities to occur. The one aspect that proved to be problematic, however, was the process that was required to be followed for contracting large amounts of AvPOL, given the limited infrastructure that was available within the affected zone. This dependency on internal processes caused great concern⁶⁶ and could have caused additional delays if alternate methods of solving the problem, to be discussed further Chapter 4 were not investigated.

Operation *Presence* – Mali, June 2018 to Present

The deployment of CAF members on Operation *Presence* is part of the “Government of Canada’s overall efforts to help set conditions for durable peace,

⁶⁵ Public Works and Government Services Canada, “Aviation Fuel: Into-plane refuelling services in the Philippines (W8484-148093/01-GRK30).” Last accessed 23 April 2019, <https://buyandsell.gc.ca/procurement-data/award-notice/PW-13-00539801-001>

⁶⁶ Based on author’s personal experiences while deployed to the Philippines during Operation *Renaissance 13-0* and Department of National Defence, “Air Task Force Post Mission Report –OP RENAISSANCE 1301,” (Comd ATF-Philippines) (Ottawa: DND, 2014), 4.

development and prosperity in Mali.”⁶⁷ Specifically, CH-147F Chinook helicopters are responsible for conducting medical evacuations, and CH-146 Griffon helicopters are employed as armed escorts, among other tasks, in support of the United Nation’s (UN) Multidimensional Integrated Stabilization Mission in Mali (MINUSMA).⁶⁸ On 28 June 2018, the UNSC adopted resolution 2423,⁶⁹ putting into action Canada’s previous commitments to contribute to the mission. Although the Government of Canada announced on 19 March, 2018, that Canada would commit a military contribution to the mission, it was not until 24 June, 2018 that the first members of the theatre activation and opening team arrived in Mali. Many of the technical agreements with other nations such as Germany, France, Belgium and the Netherlands were identified during the strategic recce as a requirement, however it was not properly documented regarding the level of support required by each country, resulting in incorrect assumptions being made due to a lack of formal agreements prior to arrival. This affected the working relationship of the coalition partners present on Operation *Presence*.⁷⁰

Conclusion

The examination of these operations, spanning across several mission types as well as over several years makes it apparent that the objectives set out at the higher headquarters to be seen as quick and agile responders across the globe have outweighed

⁶⁷ Government of Canada, “Op Presence,” last accessed 13 April 2019, <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/op-presence.html>.

⁶⁸ *Ibid.*

⁶⁹ UNSCR 2423 under Chapter VII of the United Nations Charter, the Council extended the Mission’s mandate until 30 June 2019 and maintained its strategic priority to support implementation of the 2015 Agreement on Peace and Reconciliation in Mali, notably by the Government and the Plateforme and Coordination armed groups. Multidimensional Integrated Stabilization Mission in Mali, “Mandate,” last accessed 13 April 2019, <https://minusma.unmissions.org/en/mandate-0>.

⁷⁰ Department of National Defence, “Interim Lessons Learned Report – Operation Presence Task Force Mali,” (A7) (Belleville: DND, 2018), 4.

the military doctrinal push towards planning considerations that can greatly enhance and ease the flow and sustainment of an operation.

The strategic operational objectives of getting “boots on the ground” or “bombs on target” have been proven to be key factors in determining the timeline with which the CAF will deploy and start to conduct operations. This Chapter outlined how the CAF can no longer depend on sending forward an advance party during expeditionary operations that will have ample time to prepare a theatre prior to the arrival of follow-on forces. As such, The CAF must adapt to the current structure and anticipated timelines and discover how planners can ensure that military operations are seen as successes both from the strategic and political levels as well as from the military members on the operation itself.

CHAPTER 3 – PLANNING FOR THEATRE ACTIVATION AND OPENING

Seldom will all logistics principles exert equal influence; usually one or two will dominate in any given situation. Identifying those principles that have priority in a specific situation is essential to establishing effective support.

– Joint Pub 4-0, *Doctrine for Logistics Support of Joint Operations*

There is nothing more common than to find considerations of supply affecting the strategic lines of a campaign and a war.

– Clausewitz, *On War*

As Chapter 1 discussed, with the increased importance on expeditionary capabilities and the Canadian Armed Forces' (CAF) quick response to them, the shortened timelines may have various organizations deploying prior to the arrival of the Joint Task Force Support Command (JTFSC) and becoming responsible for theatre activation and opening activities for their specific element without the expertise that one would require. Given that the deployment and sustainment of overseas operations is complex and require a high level of logistics support, it is imperative that a doctrinal understanding of the planning considerations that will affect the support requirements of theatre activation and opening activities are examined.

Adhering to the CAF's most basic planning principles and considerations is imperative in order to ensure that all opportunities are explored and the best courses of actions are selected according to the support conditions and limitations at hand. This chapter will examine planning guidelines as presented in the Principles of War, Deployment Planning Considerations identified in the Canadian Forces Joint Publications, as well as Characteristics of Air Power of the Royal Canadian Air Force (RCAF) doctrine. Considerations and factors pertaining to support will be extrapolated from each of these areas and will be discussed as they pertain to the logistics of theatre opening prior to or in the absence of the JTFSC.

The Principles of War

Canadian military doctrine showcases ten principles of war to be referenced when applying military power. Table 1.1 below lists the ten principles of war and their doctrinal description.

Table 1.1 – Principles of War

PRINCIPLES OF WAR	DESCRIPTION
SELECTION AND MAINTENANCE OF THE AIM	Every military operation must have a single, attainable, and clearly defined aim that remains the focus of the operation. The aim defines the operation; deviation from the aim dilutes effort and risks failure.
MAINTENANCE OF MORALE	Morale is the most important element in ensuring cohesion and the will to win. It is nurtured through good leadership, sound discipline, realistic training, confidence in equipment, and a sense of purpose.
OFFENSIVE ACTION	Distinct advantage lies with the offence because it confers the initiative, gives freedom of action, and compels the enemy to be reactive rather than proactive.
SECURITY	Security guards vulnerabilities and protects vital interests. It provides freedom to take offensive action and denies this advantage to an opponent.
SURPRISE	Surprise can produce results out of proportion to the effort expended. An opponent surprised is ill prepared and unable to mount an effective opposition.
CONCENTRATION OF FORCE	It is essential to concentrate superior force at a decisive time and place. Forces should be disposed in a manner which permits them to combine quickly to deliver a decisive blow or to counter an enemy threat when and where required.
ECONOMY OF EFFORT	Resources are always limited, so they must not be wasted. To achieve maximum concentration at the main area of interest, prudent risk may have to be accepted in other areas.
FLEXIBILITY	No plan can accommodate all factors of chance and opposition. Success requires the ability to alter plans to take advantage of opportunities or to counter difficulties.
COOPERATION	Cooperation among elements of a force maximizes the force's capabilities. It entails a unified aim, team spirit, interoperability, division of responsibility, and coordination of effort to achieve maximum effectiveness.

ADMINISTRATION

No plan or operation can succeed without adequate administrative and logistic support. Scarce resources and critical materiel must be controlled at the appropriate level of command. The most economical and effective use of materiel is required at all times.

Source: Department of National Defence, B-GJ-005-000/FP-001, *Canadian Forces Joint Publication 1.0, Canadian Military Doctrine*, 1st ed (Ottawa: DND Canada, 2009), 2-4.

In applying these principles of war to expeditionary operations, there are four principles that stand out as relating to logistics that should be considered in the planning of theatre activation and opening activities; namely the principles of economy of effort, flexibility, cooperation and administration. Overall, these four principles are key to conducting operations, especially specific to theatre activation and opening and the initial phases of the deployment, and should be taken into account when evaluating how a force should prepare for the deployment of their initial forces.

Economy of effort

Economy of effort is the attempt to ensure that the proper resources are pushed forward into the theatre of operations while balancing the cost or effect that sending those resources will have on the organization. It also ensures that current processes and equipment are leveraged so as to avoid duplication or extensive delays in obtaining required elements at the destination. When considering this principle, one may think of the colloquial expression of getting the best “bang for the buck,” insomuch that there is a continual search for balance between production or output (*bang*) and resources committed to create said output (*buck*). In logistics, and more specifically during expeditionary operations, Economy of effort is a mantra by which logisticians are not at luxury to ignore. Those who find themselves as the first “boots on the ground” will often be faced with little to no equipment, personnel, or time within which they must prepare

the theatre for the arrival of follow-on soldiers. Given these restrictions, the theatre activation and opening teams must work diligently to put into place the required agreements and arrangements, including investigating the possibility of using, or “piggy-backing” off of pre-existing contracts, agreements or arrangements with or between other nations.

An example from the CAF Operation *Reassurance* illustrates these points well. The author had the opportunity to deploy to Campia Turzi, Romania during Rotation 0 of Operation *Reassurance* from May 2013 to July 2013 as part of the North Atlantic Treaty Organization (NATO) Baltic Air Policing (BAP) mission. There was a requirement gap of three major pieces of equipment that were required prior to the start of the flight training that the Canadian fighter jet detachment were scheduled to conduct within days of landing in Romania. These items were the requirement for an Aircraft Rescue and Fire Fighting (ARFF) vehicle, a fuel bladder and Fuel Storage and Distribution System (FSDS) that could sustain planned Canadian fighter jet operations, and the Mobile Aircraft Arresting System (MAAS) required in the case of rapid aircraft recovery. Although verifications were being made through Canadian Joint Operations Command (CJOC) for these items through the Canadian supply system, their availability, capacity and serviceability were such that the Canadian equipment could not be relied upon, and surely not in the quick turn-around time that was required in order to commence flying operations according to the detailed timeline.

In considering economy of effort, however, options were examined via partner nations and allies who were also operating out of Europe. After some research conducted by CJOC, it was discovered that the United States (US) through the United States Europe Command (EUCOM) had availability of the three items that were required in Romania

for operations. After discussions, the Acquisition and Cross-Servicing Arrangement (ACSA) process was initiated and the required equipment was shipped from various other countries within Europe for use by the Canadians. This partnership leveraged current equipment that was already found in Europe rather than spending additional funds to ensure its serviceability and then shipping it over the Atlantic Ocean.⁷¹ This is where Economy of effort becomes essential in ensuring the completion of required support tasks while doing so in a quick, effective way given the limited resources at hand.

Flexibility

Flexibility refers to both the people and processes in place when it comes to addressing the multitude of logistical challenges that come with the deployment of forces and how one must not only think “outside-the-box”, but how there must also be room for allowances within the processes themselves to make workable solutions with chance opportunities.⁷² Although it could be argued that flexibility should be an innate personality characteristic of those performing the logistics functions during the initial stages of theatre activation and opening, it should also be a principle which is considered in the planning and setting up of activation activities. It is with openness to explore unconventional means and being ready to act on potential solutions to problems that increases a forces’ flexibility.

This principle will be demonstrated through an example during the author’s deployment on Operation *Renaissance* with the Disaster Assistance Response Team (DART) in the Philippines from November to December 2013. The command and control

⁷¹ Based on author’s personal experiences while deployed to Romania during Rotation 0 of Operation *Reassurance*.

⁷² Department of National Defence, B-GJ-005-000/FP-001, *Canadian Forces Joint Publication 1.0, Canadian Military Doctrine*, 1st ed (Ottawa: DND Canada, 2009), 2-6.

structure for this deployment was a combined operation in coordination with joint forces. The Canadian Joint Task Force (CJTF) Commander had under his command the elements comprising the DART as well as the Air Task Force consisting of an aviation detachment and an Air Task Force (ATF) Headquarters. Given this combined construct, there was also a JTFSC responsible for operational level support requirements.⁷³

As the CAF had committed to being responsive within 24 hours for Humanitarian Assistance and Disaster Response (HADR), there was an expectation for the helicopters forming the aviation detachment to be ready to conduct operations within a few days of arriving in theatre. Given the damage caused to much of the surrounding areas, it was challenging to secure working aviation fuel facilities to adequately fuel the helicopters. The JTFSC had commenced the contracting process, but strict timeline restrictions did not allow for the completion and attribution of a contract for several days after the requirement to start HADR operations. The author, the A4⁷⁴ for the operation and responsible for the logistics and support of the Air Task Force (ATF), contacted the Multi National Coordination Centre (MNCC) to investigate interim possibilities for fuel acquisition. She requested that the Canadian Liaison officer (LO) in the MNCC investigate the possibility of transferring fuel from coalition aircraft arriving at the local airport in support of HADR operations to then be filtered through the Canadian fuel bowser and subsequently fuel the helicopters in order to ensure continued operations. Over the next 48 hours, the suggestion came to fruition and the Canadian fuel bowser

⁷³ Based on author's personal experiences while deployed to the Philippines during Operation *Renaissance 13-0* and Department of National Defence, "End Tour Report – Joint Task Force – Philippines, OP RENAISSANCE 13-01," 3350-1 (Comd JTF-Philippines) (Ottawa: DND, 29 January 2014), 1.

⁷⁴ A4 is the Acronym for the Air Force representative responsible for support and logistics requirements within an organizational headquarters.

received fuel off-loaded from two coalition aircraft, which ultimately enabled HADR operations within days of the platforms arriving on-ground.⁷⁵

This example both of flexibility of the people involved in the process as well as of the process itself shows how “outside-the-box” thinking as well as openness to exploring this type of thinking can open on up to potential solutions to problems. In this case, using a mechanism that already existed to rely on partner nations enabled the ATF to be flexible in how they would obtain fuel while awaiting for the concretization of the official fuel contract.

Cooperation

As for cooperation, one could argue that it occurs naturally whenever people or organizations work together towards a common goal, but it is essential to ensure that it occurs at the operational and strategic levels, where people of different nations may be working in a more dispersed manner than at lower levels. Continued cooperation keeps relationships flourishing and can become mutually beneficial for both in the relationship, should one party require a special service in a time of need where time is of the essence. Cooperation as a principle of war can refer to several aspects, be it cooperation between individuals performing tasks at the tactical level, between organizations at the operational level, or between national representatives or other officials at the strategic level. In terms of dealing with expeditionary operations, it is the cooperation that occurs at the tactical and operational levels that most directly affects the preparedness of the soldiers on the ground.

⁷⁵ Based on author’s personal experiences while deployed to the Philippines during Operation *Renaissance 13-0* and Department of National Defence, “End Tour Report – Joint Task Force – Philippines, OP RENAISSANCE 13-01,” 3350-1 (Comd JTF-Philippines) (Ottawa: DND, 29 January 2014), 4.

A prime example can be found in the most recent activities of Operation *Presence*, Canada's ongoing peacekeeping mission with the United Nations (UN) in Mali. As the military components deployed in support of the UN Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) are formed from 56 different nations,⁷⁶ there are several countries who have difficulty in obtaining sufficient tactical, or intra-theatre⁷⁷ airlift to transport either personnel or equipment within the theatre of operations. In exploiting the Air Transport & Air-to-Air Refueling and other Exchanges of Services (ATARES) agreement, which is multinational "cashless exchange system for air transport services"⁷⁸ agreement between European and NATO nations, Canada has used its CC-130 Hercules aircraft to support Estonia with the movement of their personnel between Bamako and Gao.⁷⁹ This has become an intra-theatre solution for Estonia after contracting commercial airlift to Bamako, and has helped to build the relationship⁸⁰ between the UN mission in Gao and the co-located Operation *Barhkane*.⁸¹ This proof of cooperation between nations demonstrated how much of a force enabler it is to work with other countries and in using processes and organizations that are external to the military in order to achieve the desired military effect on the ground.

⁷⁶ Multidimensional Integrated Stabilization Mission in Mali, "About Personnel," last accessed 13 April 2019, <https://minusma.unmissions.org/en/personnel>.

⁷⁷ The term "Tactical Air Transport" is used in relation to tactical operations conducted within a theatre (or intra theatre), that is, when the air transport assets have been assigned to a Task Force. Department of National Defence, B-GJ-005-404/FP-040, *Joint Doctrine Manual, Movement Support, Air*. (Ottawa: DND Canada, 2003), 1-2.

⁷⁸ European Air Transport Command (EATC), "ATARES," last accessed 24 April 2019, <https://eatc-mil.com/en/what-we-do/atares>

⁷⁹ Major Matthew Wheildon, J4 Movement (Joint Interoperability Movement Cell), Canadian Joint Operations Command, email correspondence with author, 24 April 2019.

⁸⁰ *Ibid.*

⁸¹ Operation BARKHANE is a regrouping of French military forces that are already in West Africa, who have a mandate for counter-terror operations across the Sahel region. The Defence Post, "Operation Barhkane," last accessed 13 April 2019, <https://thedefensepost.com/tag/operation-barkhane/> and Government of Canada, "OP FREQUENCE," last accessed 13 April 2019, <https://www.canada.ca/en/departement-national-defence/services/operations/military-operations/current-operations/operation-frequence.html>

Administration

Lastly, the administration of personnel and resources in the theatre remains a critical aspect of ensuring that the most economic and effective use of materiel occurs at all times. Extensive preparation ensures that forces are ready for their tasks, ultimately enabling the bigger fight as part of the global operation, and must not be overlooked for risk of unpreparedness and unsuitability for the task-at-hand.⁸² Administration as a principle of war can seem out of place, given the importance that militaries impart on kinetic capabilities in the realm of conflict. However, administration does not simply pertain to the processes dealing with personnel files and fiscal budgets, but also includes the entirety of the logistic support system and how personnel and equipment are administered. This, from the minutest item of clothing required in the theatre of operations, to a spare aircraft part labeled as an Urgent Operational Requirement (UOR) required to render an aircraft operational.⁸³

An excellent example of this administration and its importance to the sustainment and continuation of the fight is the Forward Logistics Sites (FLS) that the Royal Canadian Navy (RCN) sets up and utilizes when deployed overseas. An FLS is “An overseas location, with port and airfield facilities nearby, which provides logistic support to naval forces within the theater of operations during major contingency and wartime periods.”⁸⁴ As the site is overseas, contracts, agreements and arrangements are inherently prepared

⁸² Department of National Defence, B-GJ-005-000/FP-001, *Canadian Forces Joint Publication 1.0, Canadian Military Doctrine*, 1st ed (Ottawa: DND Canada, 2009), 2-6.

⁸³ Department of National Defence, B-GL-005-004/FP-001, *Canadian Forces Joint Publication 4-0, Support*, 1st ed. (Ottawa: DND Canada, October 2016), 1-2.

⁸⁴ Military Factory, “Naval Forward Log Site Definition (US DoD),” last accessed 17 January 2019, https://www.militaryfactory.com/dictionary/military-terms-defined.asp?term_id=3622.

ahead of the arrival of the deployed ship in the areas of food, fuel, munitions, specialty reparations, overseeing engineering repairs, and even arranging diplomatic clearances.⁸⁵

This allows for a quick and efficient resupply with the least amount of time remaining stagnant in port, incurring cost savings while allowing the ship to be prepared to set sail if the situation changes while alongside the shore. All of this administration must be completed while adhering to Canadian standards and regulations⁸⁶ in conjunction with ensuring the Host Nation (HN) timeline requirement and limitations are met so that there are no administrative barriers that would hinder the ships' departure once it sets sail and continues on its mission. Although this example is specific to naval resupply sites, it demonstrates the importance of ensuring that administrative processes are understood and conducted as far in advance as possible in order for logistical support to be in place in time for operational requirements.

Summary

At the onset of theatre activation and opening activities during the initial deployment phase of the operation, the principles of war become even more important to consider if the many facets of logistics and support are to be properly examined and addressed. Logistics in the realm of conflict can be complicated in the best of times, with the theatre of operations usually occurring in an area where existing contracts, agreements and arrangements may not be pre-existing. Economy of effort not only refers to bringing the requisite amount of personnel and equipment, but also possibly "piggy-backing" off of pre-existing agreements between other nations. Flexibility in the very few days usually

⁸⁵ Mark Watson, "Assistance From Ashore: The Evolution of Naval Logistics Sites From the Korean War to Operation 'Apollo'," *Canadian Military Journal*, Vol.13, No. 3 (Summer 2013).

⁸⁶ Public Works and Government Services Canada, "Standard Acquisition Clauses and Conditions (SACC) Manual," <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>.

allotted to arrange the logistical framework will allow for freedom of thought and creative solutions to problematic situations arising unexpectedly. Ensuring both the personnel and the processes are set up for success in this area is imperative to having a positive and workable outcome. Cooperation with other nations, especially at the higher levels, allows for optimization of solutions to challenges, sometimes even before theatre activation and opening activities can commence. Administration conducted ahead of time will allow for the operation to be set up for the best chance of success and to continue seamlessly throughout the operation's duration. When considered in concert, these principles will help guide logistical challenges into workable solutions by taking action as far in advance as possible, using creativity, and relying on external sources.

Deployment Planning Considerations

Given Canada's geography and geo-political situation, most operations the CAF undertakes require its personnel and equipment to be transported over long distances. This causes constraints and restraints when the Government of Canada requires that CAF operations commence within a short timeline of the official announcement, limiting the time that can be attributed to planning efforts to ensure the "right things" are in the "right place" at the "right time." The Canadian Forces Joint Publication 4.0 *Support* lists key deployment planning factors alongside other important considerations that should be considered when evaluating the Strategic Lines of Communication (SLOC), initial support, and anticipated levels of sustainment. Those that will be highlighted in this paper

are time and space, distance and destination and strategic transport assets available to carry out the deployment.⁸⁷

Time and Space

Time and space are two interlocked considerations of logistics planning that can cause the most amounts of frustration and limitations when considering deploying forces to a theatre of operations. Given Canada's particular geographical location and current state of peace, these considerations become even more important. According to the Canadian Force Joint Publication *Operational Planning Process*, time and space "define the limitations or opportunities that time and space may impose on the achievement of the stated objectives,"⁸⁸ including any factors to be evaluated with regards to the movement and sustainment of forces, as well as the impact that timeliness may have on the outcome of the operation. This planning facet can be demonstrated in looking at the deployment at the beginning of Operation *Mobile*, Canada's contribution to the NATO-led coalition Operation *Unified Protector* (OUP) in March 2011.⁸⁹

At the onset of the Operation *Mobile* campaign, Prime Minister Stephen Harper announced the military contribution on 18 March 2011, with the requirement placed on the CAF to start commencing operations by 21 March 2011⁹⁰. Given the short timeline, "support components struggled to ensure the mission was effectively sustained due to a lack of deliberate planning and direction."⁹¹ This restraint on the axis of time meant that

⁸⁷ Department of National Defence, B-GL-005-004/FP-001, *Canadian Forces Joint Publication 4-0, Support*, 1st ed. (Ottawa: DND Canada, October 2016), 6-8.

⁸⁸ Department of National Defence, B-GJ-005-500/FP-000, *The Canadian Forces Operational Planning Process* (Ottawa: DND Canada, April 2008), 4-9.

⁸⁹ Department of National Defence, "End Tour Report - Task Force Libeccio . . .", 1

⁹⁰ *Ibid.*

⁹¹ Colonel A. Pelletier, *Task Force LIBECCIO (TFL) & Air Coordination Element (ACE) – Op*

logistical planners had to find a way to ensure that the required equipment and personnel were pushed forward to the Forward Operating Base (FOB) in Trapani, where planners also had to ensure that space was available to receive said personnel and equipment, and that essential provisions such as aircraft fuel and maintenance services were available.

Destination and Distance

Destination and distance as planning factors go hand-in-hand when considering the support capabilities required for a military deployment across the globe. The relationship that one must consider is both how far the equipment and personnel must travel as well as what support elements are available for the service and sustainment of incoming CAF capabilities. Destination and Distance are two closely correlated key planning considerations that will “often drive decisions regarding the strategic transport assets used to deploy a force.”⁹² International operations will typically involve airlift and sealift, be they by using military assets or by using contracted support, but with shortened timelines and a greater expectation to respond immediately to various countries across the Earth, airlift is quickly becoming the only means by which airfield activation can occur in a timely fashion. Again, given Canada’s particular geographical location, almost every mission that Canada will commit to will require an extensive logistical tail spanning over several continents.

Strategic Transport Assets

The cost and availability of Strategic Transport Assets during the activation phase of the deployment is not usually clear given the expeditionary nature in which the request

MOBILE Roto 0 & 0A – End of Tour Report, 31 Aug 11, Annex G, 37/55 in K.J. Mills, “Logistics: Reducing Friction Through Understanding, Integration, and Ownership” (Joint Command and Staff Programme Directed Research Paper, Canadian Forces College, 2014), 43.

⁹² Department of National Defence, B-GL-005-004/FP-001, *Canadian Forces Joint Publication 4-0, Support*, 1st ed. (Ottawa: DND Canada, October 2016), 6-9.

comes about. Although the CAF owns five CC-177 Globemasters and three CC-150 Polaris aircraft configured for passengers, the CC-177s are highly sought-after aircraft and the lack of qualified crews and the cyclical heavy maintenance all the aircraft must go through are limiting factors to pushing out additional aircraft.⁹³ The further the distance between the origin and the theatre of operations, the more factors there are to consider such as prepositioning additional crews and ensuring fuel and other support requirements, including administration such as diplomatic over-flight permissions are available to allow for the continuation of operations.⁹⁴

It should be noted, however, that Strategic Transport does not necessarily have to be military-owned assets, but could consist of another nation's support or a contracted service. The Canadian Forces Joint Publication 4.0 *Support* lists Strategic Transport Assets as one of five key deployment planning factors, and specifies that "most operational deployments will involve the use of a combination of military and commercial strategic transport assets," specifying that military assets can be both CAF and those of allied nations.⁹⁵

Air Power

In order to meet Canada's foreign policy intentions of responding to global conflicts or requests for assistance, especially when considering the short timelines the CAF has to respond to expeditionary operations, it is imperative that adequate planning is conducted within the time allotted. As previously mentioned, the planning considerations

⁹³ LCol Dave Carlson, J4 Movement, Canadian Joint Operations Command, email correspondence with author, 9 April 2019.

⁹⁴ Department of National Defence, B-GJ-005-404/FP-040, *Joint Doctrine Manual, Movement Support, Air*, (Ottawa: DND Canada, 2003), 1-1.

⁹⁵ Department of National Defence, B-GL-005-004/FP-001, *Canadian Forces Joint Publication 4-0, Support*, 1st ed. (Ottawa: DND Canada, October 2016), 6-9.

specific to logistics in expeditionary operations are time and space, distance and destination, and Strategic Transport Assets. Operational planners must therefore expedite their planning in these aforementioned areas while continually considering the overall concepts of the principles of war to help guide planning considerations.

Given Canada's geography and reliance on strategic airlift to bridge the lines of communication to deploy CAF personnel and equipment in a timely manner, RCAF doctrinal planning considerations of reach, speed and support dependency cannot be overlooked. There is, however, a contemporary method of mitigating the dilemmas faced by time/space and distance/destination in capitalizing on the use of the Strategic Transport Assets found within the RCAF. As RCAF Doctrine describes, air power has eleven inherent characteristics that can be leveraged to help offset limitations faced by time, space, destination and distance. These characteristics can be found at Table 1.2., with special attention drawn to those characteristics that affect or that are affected by logistics such as speed, reach and support dependency.⁹⁶

Table 1.2 – Characteristics of Air Power

CHARACTERISTICS OF AIR POWER	DESCRIPTION
ELEVATION	The capacity to employ air power above the surface of the Earth offers the ability to observe and influence activities on the surface and below the sea.
FRAGILITY	Air vehicles tend to be more fragile than surface vehicles and, therefore, require special handling to keep them in operation.
IMPERMANENCE	Typically, air platforms cannot remain aloft indefinitely and, therefore, cannot hold a station permanently. This can be offset by committing air platforms in rotation to maintain a posture of relative permanence or by repeating missions as required.

⁹⁶ Department of National Defence, B-GA-400-000/FP-001, *Royal Canadian Air Force Doctrine*, 3rd ed (Ottawa: DND Canada, 2016), 14-15.

REACH	Air power can be projected globally, unimpeded by surface features such as mountain barriers or water expanses. The global reach of air power is a distinct characteristic that provides strategic options and contributes to the Canadian Armed Force's power projection.
SPEED	The speed of air vehicles provides a rapid response capability that can be projected over great distances. Speed can also be used to achieve surprise and allows for a reduced time of exposure to hostile action, thus increasing survivability.
SENSITIVITY	Air power is typically sensitive to environmental conditions. Bad weather, for example, creates difficulties with take-off and landing, navigation, target acquisition, and weapons delivery.
SENSITIVITY TO TECHNOLOGY	Relatively small innovations in technology can have a significant impact on the effectiveness of air power. Technological advances dictate an ongoing requirement for continuous improvement and development of air forces.
PRECISION	Air power can be employed with great accuracy and minimal collateral damage because of capabilities provided by precision guided munitions and intelligence, surveillance and reconnaissance systems.
PAYLOAD	The payloads of some air vehicles are limited when compared to those carried by maritime and land forces; although, it is possible to compensate for small payloads by using high sortie rates. In addition, a small payload delivered quickly may produce a better effect than a large payload delivered later.
STEALTH	Stealth (tactics and technology) gives air power the ability to be employed with minimal risk of detection, thereby increasing survivability and allowing for surprise.
SUPPORT DEPENDENCY	Air power requires a high level of technical and logistical support that must be provided from a support base of operations.

Source: Department of National Defence, B-GA-400-000/FP-001, *Royal Canadian Air Force Doctrine*, 3rd ed (Ottawa: DND Canada, 2016), 14-15.

Using RCAF assets allows Canada to deploy its forces in a quick manner while covering a large distance (*reach*) in a relatively short amount of time (*speed*). Although this meets the planning considerations of time and space and portions of distance and destination, there are the additional considerations of support dependency of the Strategic Transport Assets that must be examined in order to determine the best method of meeting the mission requirements in the time required.

Speed

Although distance can pose a real problem to ensuring that Canada's response is timely and can have the envisioned strategic and tactical effects on the ground, speed is an air power characteristic that can offset this issue. As "the speed of air vehicles provides a rapid response capability that can be projected over great distances,"⁹⁷ it is a significant force enabler for expeditionary operations and even more so during the activation phase, where arriving in the theatre of operations as quickly as possible is a priority. This agility is reflected in Operation *Mobile* timelines, where not only did the fighter detachment arrive in theatre the day following the adoption of the UN Security Resolution authorizing the enforcement of a no-fly zone, but the detachment was set to fly their first operational missions just three days after their arrival in theatre.⁹⁸ This continual quick reaction in the midst of decisions being made on timelines supporting political reasons demonstrates the importance that speed plays in the use of air power as strategic transport assets.

Reach

Similarly, the reach that air power is able to provide the CAF in projecting its forces and equipment globally across obstacles such as mountains, large bodies of water and even zones of conflict allows for Canada to make the commitments for assistance in the first place. This ability to extend the reach of Canadian assistance both in peace and in conflict areas was also the impetus for what is now known as expeditionary operations, as the political masters became increasingly aware of the reach that the CAF could attain with either its own internal assets or those of its allies. Canada gained an even larger sense of reach after it obtained its first wave of strategic airlift in the form of the CC-177

⁹⁷ Department of National Defence, B-GA-400-000/FP-001, *Royal Canadian Air Force Doctrine* . . ., 14.

⁹⁸ Dr. Richard Oliver Mayne, "The Canadian Experience: Operation Mobile," *Air Wing: RCAF Commanders' Perspectives During the 2011 Libyan Conflict*, 2018, 3.

Globemaster. These strategic aircraft provided Canada with the flexibility and capability to respond in a greater political sense in projecting its military forces forward.⁹⁹

Support Dependency

Although a key force enabler, air power, and more specifically strategic transport assets have a large support dependency that cannot be overlooked. There are technical requirements in the form of maximum weights permitted on the runway and taxiways, spare parts and mechanical requirements, as well as a plethora of logistical requirements such as fuel, Material Handling Equipment (MHE), and servicing equipment that must all be available in order to receive airlift.¹⁰⁰ During expeditionary operations, these services are not usually already in place at the final destination, and the responsibility falls to the activation team to identify requirements and try to ensure the seamless coordination for said services by the time of arrival of air assets on the ground. In certain cases, such as during Operation *Renaissance* 10-1 in Haiti in January 2010, there was no MHE available and the requirement was not properly communicated to Canada's strategic transport assets; requiring CAF members to offload large amounts of cargo by hand.¹⁰¹

Summary

Although utilizing CAF strategic airlift would allow for a quick deployment of personnel (*speed*) to anywhere across the world (*reach*), several key considerations come to light when evaluating the RCAF planning considerations (*support dependency*). Using

⁹⁹ Royal Canadian Air Force, "CC-177 Globemaster III – Overview," last accessed 29 April 2019, <http://www.rcaf-arc.forces.gc.ca/en/aircraft-current/cc-177.page>.

¹⁰⁰ Department of National Defence, B-GJ-005-404/FP-040, *Joint Doctrine Manual, Movement Support, Air*, (Ottawa: DND Canada, 2003), 2B-1.

¹⁰¹ D. Matsalla, and D. Riviere, "Sustainment of Hasty Deployments: Lessons Learned from Op HESTIA," *The Canadian Army Journal* 13, no 3 (Autumn 2010): 87, http://publications.gc.ca/collections/collection_2012/dn-nd/D12-11-13-3-eng.pdf.

RCAF resources means that the CAF must secure permissions such as diplomatic, over flight and dangerous goods clearances, as well as ensure that required support networks are in place such as aircraft servicing, fuel requirements, and material handling equipment required in order to properly offload personnel and equipment. In this example, RCAF support planning considerations must be evaluated to ensure that the course of action is not set up for failure, and options must be available to evaluate utilizing contracted strategic airlift that does not require the CAF to arrange for the above-mentioned requirements.

Conclusion

In considering the principles of war of economy of effort, cooperation, flexibility and administration, looking beyond integral capabilities and exploring other viable options that can achieve the required mission set while best addressing the fallibilities in the planning process should be considered. Is there an allied or coalition partner that is already in theatre that may have capabilities, be they support or strategic, that could be leveraged (*economy of effort*)? Is there a viable civilian solution via a contracted or public service that already operates in the Theatre of operations that could be leveraged? Would these options possibly materialize in less time than using internal assets would due to not having to wait for responses to various requests for permissions, etc. (*flexibility*)? Are there existing agreements, arrangements or contracts either with other countries or with a larger organization such as NATO or the UN that could be accessed and utilized¹⁰² (*cooperation and administration*) in order to save time and effort given the tight timelines that expeditionary operations necessitate?

¹⁰² Department of National Defence, B-GL-005-004/FP-001, *Canadian Forces Joint Publication 4-0, Support*, 1st ed. (Ottawa: DND Canada, October 2016), 2-12 and 2-20.

Given Canada's geography and geo-political situation, most operations the CAF undertakes require its personnel and equipment to be transported over long distances, requiring close evaluation of factors such as time and space, destination and distance, and Strategic Transport Assets. Logistical planners must find ways to ensure that the required equipment and personnel are pushed forward to the theatre of operations in a succinct manner (*time and space* and *Strategic Transport Assets*), and that the destination is prepared to receive said personnel and equipment (*destination and distance*).

Given the inherent reliance on Air Power as a Strategic Transport Asset to allow for a quick deployment of personnel (*speed*) to anywhere across the world (*reach*), several key considerations (*support dependency*) must be evaluated when determining whether the RCAF or contracted solutions should be utilized. As essential provisions such as aircraft fuel and maintenance services must be available at the destination during the tight timelines that the CAF experiences at the onset of expeditionary operations, solutions external to CAF strategic assets must continually not be overlooked.

CHAPTER 4 – EXTERNAL SOURCES FOR LOGISTICS SUPPORT

When the Army is landed, the business is half done.

– MGen James Wolfe at the Battle of Quebec, 1759¹⁰³

In any specific action, in any measure we may undertake, we always have the choice between the most audacious and the most careful solution.

– Clausewitz, *On War*

As discussed in Chapter 1, the promise of Canadian Foreign Policy to deploy forces more swiftly and efficiently into theatres of operation has changed and subsequently reshaped the way that the Canadian Armed Forces (CAF) operates and reacts to issues both at home and abroad. The current reliance on internal capabilities such as CAF platforms used for strategic airlift and the model of enacting Standing Offers (SO) by the Joint Task Force Support Command (JTFSC) during theatre activation and opening leave a gap in the CAF's ability to arrive in a more succinct fashion and in being more prepared to commence operations once in theatre.

This chapter will show that, at the onset of theatre activation and opening, the principles of war become even more important to consider if the many facets of logistics and support are to be properly examined and addressed. When considered in concert, these principles will help guide logistical challenges into workable solutions by taking action as far in advance as possible, using creativity, and relying on outside sources. As such, organizations external to the Canadian Armed Forces and the Department of National Defence should be leveraged to provide adequate solutions that close the current gap that exists during the initial deployment of personnel and equipment and the preparation for theatre activation and opening activities prior to the arrival of the JTFSC.

¹⁰³ Robert Deb Heinl, *Dictionary of military and naval quotations*, (Annapolis, ML: The U.S. Naval Institute, 1966), 11.

This chapter will first outline several external organizations and processes that could be leveraged by the CAF for inclusion in future operations. Where pertinent, associated limitations or risks that should be considered prior to engaging with said organizations and associated procedures will be identified and discussed. This chapter will then discuss ways in which the external processes and procedures could be used during CAF operations, and will leverage the case study examples presented in Chapter 2, in order to better illustrate and highlight opportunities for future use and support.

External Sources

Although the CAF has been deploying to theatres of operation for decades, the way in which it does so has gradually changed over the years. From a more widespread force with operational bases in Europe, to centralizing forces back in Canada and requiring deploying all personnel and equipment across great distances, the CAF has been faced with the challenge and task of being more self-sufficient from “A to Z.” With the increase in commitments to various operational theatres at once, and often within shorter timeframes than in years gone by, the CAF has had to become more dependent on external organizations and processes in order to ensure that the strategic and political objectives of responding to an event or crisis can be met. Based on the assumption that this phenomenon will continue, this section will explore some external sources that should be better explored by the CAF in order to become more efficient in the quick deployment of forces and to ensure timely theatre activation and opening activities.

Although the discussion of organizations and processes is not exhaustive, the focus is on North Atlantic Treaty Organization (NATO) alliance and partner organizations and processes that could easily be leveraged and that already contain a level of expertise and experience dealing with various military factions. This section will

examine the NATO Support and Procurement Agency (NSPA), Defence Logistics Support and Services Standing Offers (DLSSOs), Mutual Logistics Support Arrangements (MLSAs), Acquisition and Cross-Servicing Agreements (ACSAs), and the Air Transport & Air-to-Air Refueling and other Exchanges of Services (ATARES) program. These programs and services will be explained in a general sense and examples given to clarify their use. The next section will expand further upon each of the programs in examining how each of these programs could be capitalized upon to bring additional flexibility and greater operational effectiveness to the CAF.

NATO Support and Procurement Agency (NSPA)

According to NATO documentation, NSPA “brings together in a single organization NATO’s logistics and procurement support activities, providing integrated multinational support solutions for its stakeholders.”¹⁰⁴ NSPA is the combined successor organization of those formerly known as the NATO Maintenance and Supply Agency (NAMSA), the Central Europe Pipeline Management Agency (CEPMA) and the NATO Airlift Management Agency (NAMA). NSPA is also the executive body of the NATO Support and Procurement Organization (NSPO), whose mission it is to “provide responsive, effective and cost-efficient acquisition, logistics, operational and systems support and services to the Allies individually and collectively, in time of peace, crisis and war, in order to maximize the ability and flexibility of their armed forces.”¹⁰⁵

NSPA contains a full array of services, experts and equipment for use by NATO countries to help them set up for efficient operations, be it as part of a coalition of the

¹⁰⁴ NATO Support and Procurement Agency, “Logistics Operations,” last accessed 2 February, 2019, <https://www.nspa.nato.int/en/organization/Logistics/logistics.htm>.

¹⁰⁵ NATO Support and Procurement Agency, “What is NSPO?” last accessed 13 April 2019, <https://www.nspa.nato.int/en/NSPO/nspo.htm>.

willing, or as a stand-alone deployment or exercise. This includes providing contracting expertise, pre-arranging agreements in the required theatre of operations and even making available equipment and pre-made equipment suites, among others.¹⁰⁶ As a NATO member country since 1949,¹⁰⁷ and a paying member of the Operational Logistics Support Partnership (OLSP),¹⁰⁸ Canada is entitled to use these services, which could come in great use during the initial period of theatre activation and opening. This would be especially rewarding when in an area of operations where Canada has never been and therefore has no pre-standing arrangements, agreements or contracts for essential logistical and sustainment requirements. In fact, the CAF has leveraged the use of NSPA's robust predecessor, NAMSA, during Operation *Athena* and Operation *Attention* (both in Afghanistan) to assist with the acquisition of goods and services related to troop transport, accommodations, feeding, and strategic airlift.¹⁰⁹ In a more recent example, Canadian Joint Operations Command (CJOC) is currently leveraging NSPA medical and dental services on Operation *Kobold*,¹¹⁰ proving that there is merit to the program; even for specialized requirements.

Defence Logistics Support and Services Standing Offer (DLSSO)

A Standing Offer (SO) is not a contract, but is rather “an offer from a potential supplier to provide goods and/or services at pre-arranged prices, under set terms and

¹⁰⁶ NATO Support and Procurement Agency, “What is NSPA?” last accessed 13 April 2019, <https://www.nspa.nato.int/en/organization/nspa/nspa.htm>.

¹⁰⁷ Government of Canada, “Canada and the North Atlantic Treaty Organization,” last accessed 22 February, 2019, https://www.international.gc.ca/world-monde/international_relations-internationales/nato-otan/index.aspx?lang=eng.

¹⁰⁸ Major Matthew Wheildon, J4 Movement (Joint Interoperability Movement Cell), Canadian Joint Operations Command, email correspondence with author, 24 April 2019.

¹⁰⁹ Department of National Defence, *Evaluation of the Canadian Forces Contractor Augmentation Program (CANCAP)*, (Ottawa: Chief of Review Services, 2006), 1-19.

¹¹⁰ Department of National Defence, “Briefing Note for Comd CJOC – ADM(Mat) Engagement in Support of Exceptional Contracting Authority with the NATO Support and Procurement Agency (NSPA),” 3350-1 (J4/RDMIS #473745) (Ottawa: DND, 1 November 2018), 1.

conditions, when and if required.”¹¹¹ This provides a convenient and money-saving method of ensuring that certain goods or services are obtainable within a specified timeframe, but that the cost has been pre-determined. However, once a "call-up"¹¹² against the standing offer is issued, the standing offer then becomes a contractual obligation for the amount indicated in the call-up.

In the same sense, a Defence Logistics Support and Services Standing Offer (DLSSO) is a SO that has been established for primary use by the Royal Canadian Navy (RCN) in order to ensure replenishment can occur at scheduled sea ports across the globe while being certain that the standards of foods, fuel, services and other adhere to both NATO and Canadian-specific standards; while also ensuring the contractor leverages known NATO and other partner agreements and arrangements if they so exist for specific commodities.

As a practical example, while deployed outside of Canada, RCN Ships can utilize existing agreements such as the Fuel Exchange Agreement (FEA)¹¹³ and NATO Standardization Agreement (STANAG).¹¹⁴ However, when these are unavailable, the

¹¹¹ Public Works and Government Services Canada, “FAQ - What are standing offers,” last accessed 14 April 2019, <https://buyandsell.gc.ca/for-businesses/selling-to-the-government-of-canada/the-procurement-process/standing-offers>.

¹¹² Once a standing offer is issued, the department or agency deals with you directly to obtain the goods or services they need. Call-ups against a standing offer are processed faster, involve less paperwork and have pre-set prices and terms already determined. For taxpayers, the advantages are lower government administrative costs and reduced inventory. Public Works and Government Services Canada, “Definition of Call Up,” last accessed 14 April 2019, <https://buyandsell.gc.ca/for-businesses/selling-to-the-government-of-canada/the-procurement-process/standing-offers>.

¹¹³ The Fuel Exchange Agreement (FEA) is an agreement between the Crown and the USA which allows Canada to leverage US fuel procurement tools in non-domestic ports. The FEA is the primary source of non-domestic fuel. Public Works and Government Services Canada, *NISO – World Wide Fuel for DND*, (Halifax: PGWSC, 2017), 3.

¹¹⁴ STANAG: North Atlantic Treaty Organization (NATO) Standardization Agreement (STANAG) 1200 is a Mutual Logistics Support Arrangement (MLSA) with NATO countries which provides a mechanism for fuelling in some alliance ports. Public Works and Government Services Canada, *NISO – World Wide Fuel for DND*, (Halifax: PGWSC, 2017), 3.

World Wide Fuel Standing Offer W010X-16B042/001/PWA¹¹⁵ may be used upon prior approval from N4¹¹⁶ Contracts Staff. This SO offers to fulfill the requirement for naval distillate fuel, limited quantities of other fuel and arrangements for fuel support services to all RCN classes of ships while deployed outside Canada. The Statement of Work (SOW) associated with the SO describes in detail not only the types and quantities of fuel required for each class of vessel¹¹⁷, but also delineates existing agreements that the contractor could leverage (such as the FEA and STANAG 1200)¹¹⁸ as well as testing and quality assurance requirements, plus specific issues that may be faced with certain classes of ships (such as the *Iroquois* and *Victoria* ship classes discharging effluent during fuelling).¹¹⁹ Global port requirements are broken down into zones¹²⁰ and include a list of potential ports that could be utilized so that the contractor is aware of the liaison that must occur prior to the ship's arrival in order to fulfill the contractual obligations of the SO. It also outlines standard lead times for fuelling requirements as three calendar days in the USA and seven calendar days Internationally,¹²¹ with fuelling being completed on the first business day after the ship's arrival into port.¹²² In times requiring urgent delivery response times, there also exists a stipulation for the contractor to complete fuelling

¹¹⁵ This statement of work (SOW) defines the requirement for naval distillate fuel, limited quantities of other fuel and arrangements for fuel support services to all ships of the Royal Canadian Navy (RCN) while deployed outside Canada. Public Works and Government Services Canada, *Appendix A Statement of Work Non-Domestic Fuel Requirements Royal Canadian Navy, NISO – World Wide Fuel for DND*, (Halifax: PGWSC, 2017), 3.

¹¹⁶ N4 is the Acronym for the Naval representative responsible for support and logistics requirements within an organizational headquarters.

¹¹⁷ Public Works and Government Services Canada, *Annex G Classes of Canadian Naval Ships Fuelling Capacities to NISO – World Wide Fuel for DND*, (Halifax: PGWSC, 2017), 1.

¹¹⁸ Public Works and Government Services Canada, *NISO – World Wide Fuel for DND*, (Halifax: PGWSC, 2017), 3.

¹¹⁹ *Ibid.*

¹²⁰ Public Works and Government Services Canada, *Annex H List of Typical Ports by Zone, NISO – World Wide Fuel for DND*, (Halifax: PGWSC, 2017), 1.

¹²¹ Public Works and Government Services Canada, *NISO – World Wide Fuel for DND*, (Halifax: PGWSC, 2017), 4.

¹²² *Ibid.*, 6.

within 24 hours of the ship's arrival into port, regardless if it is a weekend or holiday, and an additional stipulation that "exceptions to response times may arise in unusual circumstances"¹²³ and that the contractor "must remain flexible to accommodate unforeseen changes . . . which could require changes to the requirement."¹²⁴

Mutual Logistics Support Arrangements (MLSA)

A Mutual Logistics Support Arrangements (MLSA) is a highly flexible Memorandum of Understanding (MOU) designed to facilitate reciprocal provision of logistics support, supplies and services between cooperating defence forces."¹²⁵ The framework from which MLSAs are derived ensure mutual cooperation and interoperability between CAF and defence organizations of partner nations that can be leveraged during operations or even for training opportunities.¹²⁶ A unique aspect of MLSAs is that the "payment" or "reimbursement" of support or services can occur either by the reciprocal provision of said services or support, by cash payment between the nations, or a combination of the two.¹²⁷

Although MLSAs may seem like an ideal system of "borrowing sugar from a neighbour" just to return the same amount of sugar later, they are meant to supplement, and not replace, the regular means of providing support. Namely, MLSAs should only be considered once it has been verified that the CAF cannot integrally provide the capability or resource, that there are no pre-established SOs or Supply Arrangements (SA) that can

¹²³ *Ibid.*

¹²⁴ *Ibid.*, 5.

¹²⁵ Department of National Defence, "Interim Policy Direction – Mutual Logistics Support Arrangements," (RDMIS #42947814) (Ottawa: DND, 7 August 2012), 1.

¹²⁶ Department of National Defence, "DND/CF Policy Directive – Mutual Logistics Support Arrangements," (Ottawa: DND, 7 August 2012), 1.

¹²⁷ Department of National Defence, "Interim Policy Direction – Mutual Logistics Support Arrangements," (RDMIS #42947814) (Ottawa: DND, 7 August 2012), 1.

be called-up, and that there is insufficient time for Public Services and Procurement Canada (PSPC) to respond and meet the operational need through contracting.¹²⁸

Acquisition and Cross-Servicing Agreement (ACSA)

Similar to the MLSA construct, the United States has instituted a number of bi-lateral standing arrangements with numerous allies and coalition partners allowing for the mutual benefit of exchanging “most common types of support including food, fuel, transportation, ammunition, and equipment.”¹²⁹ These arrangements are enabled by the Acquisition and Cross-Servicing Agreement (ACSA) process and allow for “the provision of military interoperability through leveraged contracted effects.”¹³⁰ Like MLSAs, ACSAs are non-binding agreements between the United States (U.S.) and a partner nation to conduct support transactions during an exercise or operation and provide additional options for support requirements in times of limited lead-time or when dealing with austere or distant theatres of operations. Given the sheer size and capacity of the U.S. Armed Forces, including the impressive amount of over 800 military operating bases across 70 countries¹³¹ around the globe, it is evidently more beneficial for partner nations to enter into ACSAs than for the U.S. to initiate them with others. This “additional bridge to friends and allies”¹³² greatly enhances operational effectiveness and allows for greater flexibility in establishing support options at the onset of operations.

¹²⁸ Department of National Defence, “DND/CF Policy Directive – Mutual Logistics Support Arrangements,” (Ottawa: DND, 7 August 2012), 1.

¹²⁹ Patricia Matlock, “Acquisition Cross-Servicing and Mutual Logistics Support in the Pacific” (master’s thesis, U.S. Army War College, 2009), 4.

¹³⁰ N.K. Mensah, “The Efficacy of . . .”, 38.

¹³¹ David Vine, “Where in the World is the U.S. Military?” *Politico Magazine*, no. 4 (July-August 2015), <https://www.politico.com/magazine/story/2015/06/us-military-bases-around-the-world-119321>.

¹³² Patricia Matlock, “Acquisition Cross-Servicing and Mutual Logistics Support in the Pacific” (master’s thesis, U.S. Army War College, 2009), 4.

Air Transport and Air-to-Air Refueling and other Exchanges of Services (ATARES)

The CAF has also previously utilized programs and services developed by European organizations during operations across the globe such as the Air Transport and Air-to-Air Refueling and other Exchanges of Services (ATARES)¹³³ program. ATARES, spear-headed by the Movement Coordination Centre Europe (MCCE)¹³⁴ and the European Air Transport Command,¹³⁵ is a cashless exchange system for air transport services amongst 28 European and NATO nations¹³⁶ whereby the “currency” for the exchange of services is based on the cost of an Equivalent Flying Hours (EFH) of one C-130/C-160 flying hour. The CAF is a member of the ATARES program since 2017¹³⁷ and has demonstrated the utility of the program in operations.

Summary

In revising the small sample of external organizations, programs and processes available to the CAF to assist in elements specific to the initial deployment and theatre opening activities of expeditionary operations, it is apparent that there could be many avenues of approach in assisting current CAF capabilities. As the CAF is already a user or member of some of the programs, it demonstrates the positive way in which the CAF can

¹³³ European Air Transport Command (EATC), “ATARES,” last accessed 24 April 2019, <https://eatc-mil.com/en/what-we-do/atares>.

¹³⁴ The MCCE is a multinational military movement control centre that coordinates Participants’ air and sea lift as well as Air-to-Air Refuelling (AAR) capabilities in order to improve efficiency and effectiveness and to optimize synergies. Movement Coordination Centre Europe, “Forward From the Director,” *Movement Coordination Centre Europe – MCCE at a Glance*, September 2018, 2.

¹³⁵ The EATC is a unique organization within Europe for military air transport, air-to-air refuelling and aeromedical evacuation. The overall objective is to improve the effectiveness and efficiency of the member nations military air transport efforts. European Air Transport Command (EATC), “The EATC,” last accessed 24 April 2019, <https://eatc-mil.com/en/who-we-are/the-eatc>

¹³⁶ European Air Transport Command (EATC), “ATARES,” last accessed 24 April 2019, <https://eatc-mil.com/en/what-we-do/atares>.

¹³⁷ Major Matthew Wheildon, J4 Movement (Joint Interoperability Movement Cell), Canadian Joint Operations Command, email correspondence with author, 24 April 2019.

capitalize on external avenues to assist with meeting the political and strategic goals of getting “boots on the ground” as soon as possible, and subsequently starting operations to assist with the mission at hand.

Although there are limitations and some risk, including the unseen costs of using said programs, with depending on external sources for such an important aspect of a military’s capability, the short period of time that these services would be required would be in the aim of advancing the political and strategic objectives of having Canada be one of the first countries to be present and prepared to contribute to operations on a global scale. The ability to better and more quickly project forces and be better prepared to conduct operations once in theatre strengthens both Canada’s credibility on a global scale as well as its relationships with partner other countries who find themselves closer to the majority of theatres of conflict around the world.

External Sources Applied to Case Studies

The previous section outlined various external organizations and programs that could be leveraged in order to help close gaps in deployment and theatre activation and opening capabilities. In order to better illustrate the narrowing of these gaps, this section will focus on the application of the external capabilities to the case studies presented in Chapter 2, and will explore how the outcomes could have been improved had said programs been utilized. In some instances, it will be demonstrated that portions of these programs were capitalized upon and made a significant difference in the way that the operation was able to continue.

In examining past experiences and overlaying them with the possibilities presented by the external programs in section two, it will be demonstrated how future

operational planning for expeditionary operations should include a larger dependency on these types of programs; amongst others.

NATO Support and Procurement Agency (NSPA)

During deliberate operational planning, NSPA services can be leveraged if it is selected as the result of a standard competitive contracting process. However, given the nature of expeditionary operations and the tight timelines within which it requires contracts and services to be established, there is not sufficient time for a competitive contracting process. Even for expeditionary operations, using NSPA without going through the regulated processes as per PSPC regulations would be considered sole-source contracting.¹³⁸ The limitations of NSPA being considered a sole-source contract creates limitations which prevent CJOC from using NSPA services in timely situations, as evidenced through CJOC's attempts during the theatre activation and opening activities for Operation *Presence*, Task Force *Latvia*, and continued requests through Memoranda to Cabinet (MC) for consideration for Operation *Impact*.¹³⁹ Although NSPA is considered a sole-source contract, it actually leverages the global reach of its contracting authorities and extends out to a "much broader pool of available solutions based on existing arrangements with a myriad of goods and services provider from all over the world that have previously provided support to NATO member states in one form or another."¹⁴⁰

¹³⁸ LCol Dave Carlson, J4 Movement, Canadian Joint Operations Command, email correspondence with author, 9 April 2019.

¹³⁹ Department of National Defence, "Briefing Note for Comd CJOC – ADM(Mat) Engagement in Support of Exceptional Contracting Authority with the NATO Support and Procurement Agency (NSPA)," 3350-1 (J4/RDMIS #473745) (Ottawa: DND, 1 November 2018), 2.

¹⁴⁰ Leslie Willcocks, Sara Cullen and Andrew Craig, *The Outsourcing Enterprise* (Basingstoke: Palgrave Macmillan, 2010; 10uu), 320.; Raymond Morath A., Arnold Leonard L. and Stephen Zaccaro J., "Military Leadership: An Overview and Introduction to the Special Issue," *Military Psychology* (Taylor & Francis Ltd) 23, no. 5 (09, 2011), 453-461. doi:10.1080/08995605.2011.600133 in N.K. Mensah, "The Efficacy . . . , 38.

As many of the vendors or contractors that bid through NSPA have worked with NATO member states and wish to maintain those current relationships or build future partnerships, contracting through NSPA actually increases vendor willingness to aggressively reduce the cost of their goods and services;¹⁴¹ a huge benefit to those using NSPA services. A risk of using NSPA, however, is that although contracting through them comes with superior support services to its clients, the CAF military Contracting Authorities forfeit complete control of the contracting process to a third party service facilitator who may not interpret changing Task Force requirements in a manner that provides the greatest flexibility and cost-effectiveness to Canada.¹⁴² Also, although every NATO country “pays in” to the NATO membership and can have access to the use of NSPA services, there still remains an issue of offsetting costs for those services that are used above the pre-determined “quota” for each country. This is currently being discussed within Strategic Joint Staff Director General Services Strategic J4 (SJS DGS/Strat J4), the Assistant Director (Materiel) and with the PSPC in order to determine the best means of payment and offsetting funding in a timely fashion in order to make use of the available NSPA services.¹⁴³ In the Briefing Note for the Commander CJOC from J4 Contracts in consultation with SJS DGS/Strat J4,¹⁴⁴ NSPA is identified as being a potential “key

¹⁴¹ Ron Smith, *Military Economics: The Interaction of Power and Money* (Basingstoke, England: Palgrave Macmillan, 2009), 194. Perry, *The Privatization of the Canadian Military: Afghanistan and Beyond*, 687-702 in N.K. Mensah, “The Efficacy . . .”, 38.

¹⁴² *Ibid.*

¹⁴³ LCol Martin Bedard, Canadian Liaison Officer, NATO Support and Procurement Agency, email correspondence with author, 9 November 2018.

¹⁴⁴ The Strategic Joint Staff (SJS) provides military analysis and advice to the Chief of the Defence Staff, allowing the Chief of the Defence Staff to lead the Canadian Armed Forces (CAF) strategically. The Strategic (Strat) J4 is responsible to balance CAF support between operational effectiveness and resource management. Government of Canada, “Strategic Joint Staff,” last accessed 4 May 2019, <https://www.canada.ca/en/department-national-defence/corporate/organizational-structure/strategic-joint-staff.html>.

enabler within the sustainment toolbox, providing significant support capabilities at competitive process for stakeholder nations.”¹⁴⁵

Defence Logistics Support and Services Standing Offer (DLSSO)

Through the examples showcased in the previous section, although it may seem like an extremely cumbersome task, there exist contractors with global networks already in place to be able to react and provide assistance for certain goods and services, specific to pre-arranged conditions, stipulations, agreements, pricing and timelines. In the realm of expeditionary operations occurring further and further away from Canada, these types of agreements could be essential within the deployment and theatre activation and opening phases in ensuring that, even prior to personnel leaving Canadian soil, SOs could already be activated (regardless if it is a weekend or holiday), or, if an official announcement has yet to be made, contractors could have the opportunity to “lean forward” in their planning prior to the quick deployment and arrival of CAF within the theatre of operations. This would be especially critical if the operation is occurring in an area that is relatively unknown to the CAF at the time, and the recce or theatre activation and opening elements have yet to properly grasp what resources are available in theatre, and at what price point. The expertise and pre-arranged pricing that SOs provide can be essential force enablers in ensuring that essential and more time consuming contracts for goods and services are initiated or pre-empted prior to CAF members setting foot in the theatre itself.

In the examples discussed in the first section of this chapter, it can be seen that fuel requirements in the Philippines during Operation *Renaissance* 13-1 could have been

¹⁴⁵ Department of National Defence, “Briefing Note for Comd CJOC – ADM(Mat) Engagement in Support of Exceptional Contracting Authority with the NATO Support and Procurement Agency (NSPA),” 3350-1 (J4/RDMIS #473745) (Ottawa: DND, 1 November 2018), 2.

requested via a call-up on D-Day once the government had made an official declaration of involvement, and could have potentially been ready for delivery on D+7, two days prior to the helicopters even arriving in theatre, and four days prior to requiring to refill the Canadian fuel bowser. Similarly, in the examples of Operation *Mobile* and Operation *Reassurance*, SOs could have been initiated early enough to ensure that immediate operational requirements such as fuel and ammunition were available and ready to be used in accordance with NATO STANAGs, regardless of the location of the camps after the recce team's report. This early engagement to ensure self-sufficiency as part of alliance or coalition operations would showcase the CAF as a leader in its responsiveness, would strengthen the ties between countries, and would further National strategic and political goals of the National Security Strategy.¹⁴⁶

Mutual Logistics Support Arrangements (MLSA)

As explained with some case studies earlier in this chapter, the timeframe that CAF members have to deploy and activate theatres of operation during expeditionary operations is extremely limited and leaves very little room for time consuming processes. In the example of Operation *Renaissance* 13-1, the fuel that was downloaded from the wings of the coalition aircraft was arranged by using the MLSA construct. Once the author had succeeded in having the Canadian LO in the MNCC verify options with other countries for assisting the CAF with fuel, the United Kingdom capitalized on the MOU established in 2009 between the Minister of Defence of the United Kingdom of Great

¹⁴⁶ Patricia Matlock, "Acquisition Cross-Servicing and Mutual Logistics Support in the Pacific" (master's thesis, U.S. Army War College, 2009), 17.

Britain and Northern Ireland¹⁴⁷ and Department of National Defence (DND) concerning mutual logistic support to render support to the CAF during operations. This support, rendered possible via the MLSA, allowed for helicopter operations to start on D+10 vice D+13, allowing for immediate medical and HA supplies to be transported across several of the hardest hit islands of the Philippines following Typhoon Haiyan.

A large advantage of the MLSA system is that the Commander or Commanding Officer, or their authorized delegate, has the authority to negotiate and initiate an Implementing Arrangement (IA), which is used to enact MLSAs, as they do not have a fixed dollar figure attributed to them and are often used to “trade” like commodities of the same value. This delegated level of authority has also shown additional risk to the organization, however, despite not having a dollar figure attached to the agreement. During the Operation *Mobile*, the CAF was leveraging Aviation Petroleum, Oil and Lubricant (AvPOL) from a partner nation¹⁴⁸ in order to ensure adequate supply of fuel was available for combat air operations. During the negotiation phase, however, the delegated officer accepted that there would be reciprocation of resource, or an exchange of services rather than simply transferring funds at a national level. As Canada had no specific fuel contract established for AvPOL in the theatre at the time, the Government of Canada (GoC) was responsible to ship the requisite amount of fuel back to the partner forces and their government, which ended up costing much more than a simple payment for goods would have cost.

¹⁴⁷ Department of National Defence, “DND/CF Policy Directive – Mutual Logistics Support Arrangements, Annex A: Current Mutual Logistic Support Arrangements” (Ottawa: DND, 7 August 2012), 6.

¹⁴⁸ This anecdote was shared during a briefing given by a senior officer lecturing from CJOC during DS520, 23 January 2019.

The biggest limitation of using MLSAs during expeditionary operations is actually the fact that there must be agreements upon which the CAF members can actually submit an IA. Without the pre-establishment of MLSAs with partner countries concerning mutual logistics support, it becomes an unreasonable option to consider during the early phases of the deployment and theatre activation and opening activities due to the inability to finalize negotiations and officialize the document in the requisite amount of time. Currently, there are only 9 countries¹⁴⁹ with which the DND has an approved and current MLSA; which leaves much room to lean forward either in areas where the CAF predicts they may be required to operate, or with certain partner countries with ample resources that the CAF envisions could be a close partner in an operational environment.

In looking at how MLSAs could be leveraged in future operations by using the Operation *Renaissance* 13-1 as an example, given the time and distance it takes to deploy from Canada to the Philippines, the Humanitarian Assistance Reconnaissance Team (HART) had little more than 48 hours to conduct their necessary work prior to the main body and follow on personnel and equipment arriving in theatre. In situations of extremis and/or damaged or contaminated sources of fuel, contracting could take longer than expected; especially when these on-scene investigations cannot commence investigations into fuel capacities and status prior to arriving on ground; in this case on D+5. With the assistance of other coalition partners with additional resources, however, reliance on external organizations and processes could prove to be essential in ensuring the strategic and political effects of the operation at hand are delivered (as per this example). What has

¹⁴⁹ Department of National Defence, “DND/CF Policy Directive – Mutual Logistics Support Arrangements, Annex A: Current Mutual Logistic Support Arrangements” (Ottawa: DND, 7 August 2012), 6.

not been mentioned thus far, as well, is that there was also a Royal Navy ship with integrated capacity for helicopter refueling that could also have been leveraged, had fixed-wing assets not been available or compatible. Using an MLSA construct to prepare for the exchange of goods or services during the initial stages of a deployment and theatre activation and opening activities can open up options for CAF support by relying, when required, on partner resources, be it via their integral means or via a contract.

These are examples of how discussions regarding MLSAs and procedural practices prior to entering into a theatre of operations are essential to ensuring adaptable and unique options are available once inside the Area of Operations (AO). In addition, as these recommendations do not require waiting to be in the AO before enacting or preparing to enact, discussions and preparations could commence as soon as the governmental announcement is made to provide Canadian assistance, or even sooner. In the Operation *Renaissance* 13-1 example, if discussions had been initiated on D-Day, it would have allowed 18 days for the CAF to be ready to conduct operations compared to the scheduled date on which the contract was ready to use (D+19), or even 13 days to set up an MLSA prior to the date upon which the intermediate contract was available for use (D+13).

Given the wide realm of goods and services that can be covered under an MLSA, the CAF could prepare agreements covering items such as ammunition, specialized equipment, spare parts and commodities such as fuel and other Petroleum, Oil and Lubricant. Given the proximity to many of the theatres of operation of other partner countries, as well as their sheer size and capacity to provide additional equipment and support requirements, it is in the best interest of the CAF to “front load” options for MLSAs so that, depending on the requirements in the theatre of operation, the CAF can

rely on a partner country during the initial stages of the deployment. This would ensure greater chances of success during expeditionary operations where the CAF is conducting concurrent activities of both moving into theatre and preparing to conduct quick and swift operations. On a strategic level, it would allow for greater visibility and quicker action by CAF assets without compromising key elements of mission support requirements.

Acquisition and Cross-Servicing Agreement (ACSA)

With the examples discussed in sections one and two specific to Operation *Reassurance* in Romania, ACSAs were leveraged in three instances in order to ensure operational effectiveness during Roto 0. There existed an obvious requirement for a large amount of AvPOL storage for the planned Combat Air Patrols (CAPs) that were being conducted by the CC-188 Hornet fighter jets in conjunction with the Romanian Air Force in support of the NATO Baltic Air Policing (BAP) mission. Shortly after arriving on-site, inspecting the fuel storage tanks and testing the fuel that was planned for use within the Romanian compound, it was determined that neither the fuel, nor the storage containers met the minimum Canadian standards for fuel storage requirements under the Canadian Environmental Protection Act.¹⁵⁰ After investigating the possibility of having a Fuel Supply Delivery System (FSDS) with associated fuel bladders deployed into theatre, it was determined that the timeframe in which the equipment was expected to remain in theater, the cost of sending it into theatre from Canada, and the time that it would take to ensure the proper expertise was on-site during the setup and initial use of the system were all factors highlighting the inefficiencies of sending Canadian equipment to solve the

¹⁵⁰ Based on author's personal experiences while deployed to Campia Turzi, Romania, during Roto 0 of Operation Reassurance and Government of Canada, "Justice Laws Website," last accessed 27 April 2019, <https://laws-lois.justice.gc.ca/eng/regulations/sor-2008-197/index.html>.

problem. It was further determined that the timeframe that would be required to conduct proper contracting for AvPOL delivery services would also be cumbersome, since the contract that was in place was for the fuel only, and not for refueling the aircraft directly according to a specific flying schedule. Similarly, the CAF did not have an additional adequately sized ARFF to send to the mission given the airfield category that was required to be maintained given the aircraft landing at the airfield. A third gap was the lack of a MAAS required in the case of rapid aircraft recovery.¹⁵¹

In considering economy of effort, options were examined via partner nations and allies who were also operating out of Europe. After some research conducted by CJOC, it was discovered that the United States (U.S.) through the United States Europe Command (EUCOM) had availability of the items that were required in Romania for operations. After discussions, the ACSA process was initiated and the required equipment was shipped from various other countries within Europe for use by the Canadians. This partnership leveraged current equipment that was already found in Europe rather than spending additional funds to ensure its serviceability and then shipping it over the Atlantic Ocean.¹⁵²

As per the examples above, the use of ACSAs can be key to ensuring operational commanders “have the logistical support needed, while simultaneously reducing redundancy, stockpiling, and limiting the vulnerability of our logistical lines of communication;”¹⁵³ not to mention the cost savings they can incur/provide. In spanning

¹⁵¹ Based on author’s personal experiences while deployed to Campia Turzi, Romania, during Roto 0 of Operation Reassurance

¹⁵² Based on author’s personal experiences while deployed to Campia Turzi, Romania, during Roto 0 of Operation Reassurance.

¹⁵³ Patricia Matlock, “Acquisition Cross-Servicing and Mutual Logistics Support in the Pacific” (master’s thesis, U.S. Army War College, 2009), 2.

out to future operations, ACSAs could be leveraged immediately upon receiving the direction from the GoC on CAF involvement (on D-Day). In the example of Operation *Reassurance* above, this means that ACSAs could have been investigated and an IA initiated as the recce team departed Canada, vice once the team found themselves in theatre preparing to conduct operations. In the example of Operation *Mobile* or Operation *Presence*, ACSAs could have been investigated for essential yet problematic areas such as ammunition, equipment and transportation until CAF processes and equipment were sufficiently established to be self-sufficient.

Air Transport and Air-to-Air Refueling and other Exchanges of Services (ATARES)

Even when considering the fact that the Operation *Renaissance* 13-1 Lessons Learned report specifies that the use of contracted airlift actually assisted in minimizing the deployment timeline,¹⁵⁴ given the extensive distance that the flights had to cover, the completion of the arrival of equipment into theatre did not occur before D+19. When considering the fact that a DART mission is usually 30-60 days in length in total, the question can be asked whether there exists a more efficient way to ensure that the team on the ground can complete their operational tasks by getting equipment into theatre more quickly with additional contracted airlift or in leveraging personnel and/or equipment from other organizations?

The ATARES program is widely used by other countries during HADR missions could possibly create a “bottleneck” for HADR missions, given the amount of equipment that many countries would require to move within the same timeframe. On the other hand,

¹⁵⁴ Department of National Defence, “OP RENAISSANCE 13-01 Lessons Learned Report,” 3350-OP RENAISSANCE (CFWC A&LL) (Ottawa: DND, 5 February 2014), A-1.

this could pose as beneficial to the CAF if there was a requirement to move smaller amounts of equipment from an Operational Support Hub close to other partner countries using the ATARES program and moving supplies into or between the theatre(s) of operation. In the CAF example of Operation *Presence*, the ATARES program was leveraged given that the CAF was in an advantageous position when it came to intra-theater airlift. After failed attempts at waiving the requirement for the clearances, which would permit the Chinook helicopters to arrive in theatre and be prepared for use in medical evacuations during the mission, the CAF leveraged the use of an Ethiopian aircraft (who had clearance approval for heavy aircraft landing in Burkina-Faso/Mali) via the ATARES program to transport the Canadian Chinooks into theatre.

The ATARES program is one that could be widely used during expeditionary operations in conjunction with Canadian SAL, given that the majority of operations that Canada is involved in will be within the European, Asian and African continents, from where the majority of ATARES members operate the airlift. Having the option of using ATARES partner airlift opens up solutions to have personnel and equipment transported on a regular basis either from an Operational Support Hub or other third location using coalition airlift on an as-required basis; creating shorter airlift requirements for CAF airlift that already has to close the large gap across the Atlantic or Pacific Ocean. Particularly useful during expeditionary operations that are several “legs” away from Canada, ATARES could be leveraged during the initial phases of an operation to help get the requisite personnel and equipment into theatre with limited delays.

Conclusion

Through examining case studies of some of the CAF’s more recent operations, this chapter revealed how the principles of war of economy of effort, flexibility,

cooperation and administration become even more important to consider at the onset of theatre activation and opening activities if the many facets of logistics and support are to be properly examined and addressed. During expeditionary operations, it is imperative to take action as far in advance as possible to devise workable solutions to logistical challenges using creativity and engaging with outside sources.

Organizations such as NSPA can be leveraged early on in the operational planning process to gain expert advice, leverage services or equipment for an upcoming deployment, or to utilize as an on-scene expert prior to or in the initial phases of the deployment. Although external to the CAF, many of the vendors or contractors that bid through NSPA have worked with NATO member states and wish to maintain those current relationships or build future partnerships, allowing for aggressively reduced costs of their goods and services. Although involvement is being discussed at the strategic level, there requires additional “pull” at higher levels to be able to provide guidelines that will allow contracting through NSPA, as it is currently considered “sole-source” contracting by PSPC.

Programs such as ATARES are already widely used by other countries, and have been used by the CAF as well during recent missions. In order to gain strategic advantage of moving requisite personnel and equipment across the globe in a quicker and more efficient manner, however, there is definitely room for greater consideration of ATARES advantages during the planning process, rather than as a “band-aid” solution to a problem. With more foresight, the ATARES program can be used to assist the CAF in meeting political and strategic objectives of getting into the theatre of operations in a quicker manner and in commencing important operations much sooner than with solely relying on the CAF’s strategic airlift capability.

Processes such as DLSSOs, MLSAs, and ACSAs are all within the contracting realm, but have nuances that set them apart from one another. DLSSOs utilize SOs with an external contractor who has a multitude of agreements with various suppliers across the globe that can be “called-up” within a specified period of time to provide required goods and services to military operations. DLSSOs could be activated as soon as an official announcement is made, or even sooner if contractors “lean forward” in their planning. Their critical advantage would be when dealing with an operation occurring in an area that is relatively unknown to the CAF at the time, and the recce or theatre activation and opening elements have yet to properly grasp what resources are available in theatre.

The advantage of using MLSAs and ACSAs is that they have been pre-arranged to easily acquire goods and/or services from other countries on a reciprocal basis and are easily activated.¹⁵⁵ Although they are intended to provide an alternative acquisition option for logistics support, they are an avenue that can be explored quickly, internationally, and without resorting to commercial contracting procedures.¹⁵⁶ The main takeaway for these three processes, however, is the imperative requirement to prepare and arrange for these types of agreements during times of peace so that they may be leveraged during times of conflict or requirement for quick response.

As per the examples and the explanations given throughout this chapter, partaking in external organizations, programs and processes enhance the CAF’s ability to meet the political and strategic objectives of ensuring a quick military response and the ensuing

¹⁵⁵ Patricia Matlock, “Acquisition Cross-Servicing and Mutual Logistics Support in the Pacific” (master’s thesis, U.S. Army War College, 2009), 2.

¹⁵⁶ Patricia Matlock, “Acquisition Cross-Servicing and Mutual Logistics Support in the Pacific” (master’s thesis, U.S. Army War College, 2009), 2.

visibility “on the ground.” Utilizing external sources for cooperative support does not hinder, but increases timely, flexible, and efficient logistics during the deployment and within the theatre of operations. In addition, when the CAF engages in operations as part of an alliance or coalition and is able to be a leader in its responsiveness and ability to operate within a short timeline, it strengthens the ties between countries and furthers National strategic and political goals.

RECOMMENDATIONS & CONCLUSION

As the changing expectations relating to time and space have necessitated a balance between effectiveness and efficiency, this paper argued that the CAF needs to explore further options available to Canada through external agencies and processes in order to better support the logistics specialists on the ground to prepare for imminent operations within a constricted period of time.

As various CAF operations have shown, capability gaps exist within the initial stages of deployment and theatre activation and opening activities. As operations and Canada's commitment to them continue to grow in number, the CAF must ensure that it is examining the best way to ensure effective and efficient operations, which includes relying more on external processes and organizations that, although may not be Canadian, will allow for a greater Canadian strategic and political effect on the ground. There exists a greater need to ensure that adequate equipment is available in required theatres of operation in order to be able to ramp up operations almost immediately and organizations external to the Canadian Armed Forces and the Department of National Defence exist that could be leveraged to provide adequate solutions that could satisfy this need.

Chapter 1 exposed the evolution of Canadian military operations and logistics over the past 50 years and how changes in Canada's Defence policy have shaped how logistics activities are handled when it comes to the deployment of forces for expeditionary operations. The author's assumptions that Canada will continue to be engaged in expeditionary operations requiring to deploy rapidly and ensure early sustainment¹⁵⁷ are

¹⁵⁷ General James L. Jones, "What's in a Word? 'Expeditionary Means More than Just Getting There Quickly,'" *Armed Forces Journal International* 138, no. 3 (October 2000), 60 in Thierry Gongora, "The meaning of Expeditionary . . . , 3.

supported by Canada's most recent Defence Strategy, *Strong, Secure, Engaged*, which places increased importance on expeditionary capabilities in order to support national interests and international objectives, and by writings by Fergusson, that state that Canadian decision-makers will continue to be driven by political motives including that of the national image being seen in a positive role.¹⁵⁸

Chapter 2 proposed that the political objective to be seen as quick and agile responders across the globe has taken precedence over the military doctrinal push towards planning considerations that can greatly enhance and ease the flow and sustainment of an operation. This was demonstrated through examining the four case studies of military operations spanning across several mission types as well as over several years. In these examples, the strategic objectives of getting *boots on the ground* or *bombs on target* caused for gaps in the theatre activation and opening activities that, had they not been resolved, could have had a significant impact on the overall mission.

With the changes in response timelines, the CAF is forward deploying its assets prior to ensuring that all theatre activation and opening activities have taken place more frequently. The CAF can therefore no longer depend on sending forward an advance party during expeditionary operations that will have ample time to prepare a theatre prior to the arrival of follow-on forces. It must adapt to the current structure and anticipated timelines and examine how planners can ensure that military operations are viewed as successful both from the strategic and political levels as well as from the military members on the operation itself.

¹⁵⁸ James Fergusson, "Over There, From Here: Expeditionary Forces and the Canadian Air Force," paper presented to the Air Symposium, Trenton, Ontario, 2003, 3.

Chapter 3 validated the consideration of looking beyond integral capabilities and exploring other viable options that can achieve the mission set for expeditionary operations while best addressing the fallibilities in the planning process. The principles of war along with other doctrinal deployment planning considerations are key to conducting theatre activation and opening activities and should be taken into account when evaluating how a force should prepare for the deployment of their initial forces.

Capitalizing on external capabilities includes leveraging allied or coalition partner capabilities and contracts that are already in theatre (*economy of effort, flexibility*), and examining existing agreements, arrangements or contracts either with other countries who are not in theatre or with a larger organization such as NATO or the UN that could be accessed and utilized¹⁵⁹ (*cooperation and administration*). Looking externally assists logistics planners to find ways of ensuring that the required equipment and personnel are pushed forward to the theatre of operations in a succinct manner (*time and space and Strategic Transport Assets*), and that the destination is prepared to receive said personnel and equipment (*destination and distance*) in the tight timelines that expeditionary operations necessitate. Similarly, increasing the options for several potential avenues fulfill the inherent reliance on Air Power as a Strategic Transport Asset to rapidly deploy personnel (*speed*) to anywhere across the world (*reach*), helps offset other key considerations that must be evaluated when determining whether the RCAF or contracted solutions should be utilized (*support dependency*). The analysis herein shows that these doctrinal planning considerations support the notion of extending beyond the CAF's internal processes to accomplish expeditionary operations more effectively.

¹⁵⁹ Department of National Defence, B-GL-005-004/FP-001, *Canadian Forces Joint Publication 4-0, Support*, 1st ed. (Ottawa: DND Canada, October 2016), 2-12 and 2-20.

Chapter 4 introduced a variety of organizations external to the CAF and the Department of National Defence that could be leveraged to provide adequate solutions that would close the current gap that exists during theatre activation and opening activities. Although the discussion of organizations and processes is not exhaustive, the focus is on NATO alliance and partner organizations and processes that could easily be leveraged and that already contain a level of expertise and experience dealing with various military factions. Organizations such as NSPA can be leveraged early on in the operational planning process to gain expert advice, leverage services or equipment for an upcoming deployment, or to utilize as an on-scene expert prior to or in the initial phases of the deployment. Although involvement is being discussed at the strategic level, there requires additional “pull” at higher levels to be able to provide guidelines that will allow contracting through NSPA by PSPC. Although the ATARES program is already being used by several nations including Canada on its most recent mission *Operation Prescence*, there is definitely room for greater consideration of the programs’ advantages during the planning process, rather than as a “band-aid” solution to a problem.

Processes such as DLSSOs, MLSAs, and ACSAs are all within the contracting realm and can be activated as soon as an official announcement is made, or even sooner if contractors “lean forward” in their planning. The main takeaway for these three processes, however, is the imperative requirement to prepare and arrange for these types of agreements during times of peace so that they may be leveraged during times of conflict or requirement for quick response.

Recommendations

The examination of the case studies of some of the CAF’s more recent operations highlighted concrete examples of the importance of considering the many facets of

logistics and support at the onset of theatre activation if are to be properly examined and addressed. It highlighted the fact that for expeditionary operations, it is imperative to take action as far in advance as possible to devise workable solutions to logistical challenges using creativity and engaging with outside sources. The following recommendations are suggestions that could assist close the gap that currently exists during theatre activation and opening during expeditionary operations.

As discussed throughout this paper, it is imperative to prepare and arrange for these types of agreements during times of peace so that they may be leveraged during times of conflict or in a requirement for quick response. As future military operations can rarely be predicted in advance, this requirement to prepare agreements and arrangements with other nations becomes difficult without knowing either the commodities or services that will be required, or the location in which they will be required. Regardless of this uncertainty, planning for the key elements required in the majority of theatre activation and opening activities as described during the case studies in Chapter 2 (e.g.: AvPOL, Firefighting vehicles, inter and intra-theatre airlift, etc) with some of Canada's closest allies as well as with some of the best equipped allies across the globe (e.g.: U.S., U.K., Australia, Germany, France, etc) could prove to render Canada with a multitude of solutions regardless of where the next expeditionary operations require the CAF's presence.

When the Government decision is made to partake in expeditionary operations, it is also recommended that SJS DGS/Strat J4 and CJOC sections responsible for theatre activation and opening activities "lean forward" with the implementing arrangements or other means by which the agreements made with various nations can be "activated." As discussed in Chapter 2, if MLSAs or other agreements had been "activated" on D-Day or

soon after, essential services could have been available for use by the CAF by the time that their assets arrived in theatre and required these services. This would also require a shift in how these agreements are considered during the planning process. Given the potential savings in cost, speed and time that these external options provide, they should be considered equally with internal options rather than utilizing CAF assets as a first resort.

Although several organizations such as SJS J4 Strat, Adm (Mat), CJOC and PSPC are all working together to try and resolve the contracting limitations that utilizing NSPA imposes, having a designated “champion” that can “reach” into each of the organizations and ensure that the proverbial “ball keeps moving” could greatly assist in advancing the issue. This person could have oversight on which NSPA services the CAF envisioned utilizing, on policy changes (both internal and external to DND) that would be required in order to ensure legal and expansive use of the services, and visibility on additional similar organizations and programs that exist that could be of interest to the CAF, such as the General Procurement Shared Services (GPSS),¹⁶⁰ the NATO Logistics Stock Exchange (NLSE)¹⁶¹, or utilizing the DLSSO construct outside of RCN requirements. Given that theatre activation activities start with SJS to conduct the preliminary actions of

¹⁶⁰ GPSS provides a capability to enhance the way NATO currently acquires goods and services by developing consolidated "Strategic Sourcing Contracts" and by offering access to the NATO "eShopping Centre" for selected General Procurement commodities, goods and services. NATO Support and Procurement Agency, "GPSS," last accessed 4 April 2019, <https://www.nspa.nato.int/en/organization/logistics/LogServ/gpss.htm>.

¹⁶¹ The NATO Logistics Stock Exchange (NLSE) is a set of tools developed by NSPA to assist customers and suppliers in putting into practice cooperative logistics concepts for item acquisition and management. These tools allow customers to arrange for the exchange of excess spare parts and to manage commonly held stocks. In addition, the NLSE allows industry to provide sales catalogues of spare parts and to submit bids with a view to supplying specific items that customers require. NATO Support and Procurement Agency, "NLSE," last accessed 29 April 2019, <https://www.nspa.nato.int/en/organization/logistics/LogServ/nlse.htm>, and LCol Martin Bedard, Canadian Liaison Officer, NATO Support and Procurement Agency, email correspondence with author, 29 April 2018.

determining the Strategic Lines of Communication (SLOC), a senior officer holding a rank of no lower than Lieutenant Colonel from within SJS is recommended to be the champion of these “Phase 0”¹⁶² external logistics solutions.

As delineated in Chapter 1, the organizations responsible for theatre activation and opening activities are found at the strategic and operational levels of SJS and CJOC respectively. However, given the trending requirement for the tactical level units to be present in the theatre of operations at earlier stages, it is recommended that the information regarding the external possibilities is distributed to the logisticians and other military members that might find themselves in a situation of being responsible for the tactical level implementation of theatre activation and opening activities. Although certain courses and training opportunities are delivered by the external organizations discussed throughout this paper (e.g.: NATO,¹⁶³ MCCE,¹⁶⁴ EATC¹⁶⁵), the number of

¹⁶² The “Phase 0” of an operation involves those joint interagency and multinational activities conducted on an ongoing, routine basis to assure or solidify friendly relationships and alliances and/or deter potential adversaries, Department of Defence, *Doctrine for the Armed Forces of the United States, JP 5 -0*, Vol. 1, (Washington, D.C.: Joint Chiefs of Staff, 2011), 13.

¹⁶³ The NATO school in Oberammergau, Germany hosts a variety of courses that provide an overview of NATO programs and associated partnership opportunities available. Examples of courses are the NATO Logistics Course, the NATO Movement and Transportation Course, and the NATO Logistics Operational Course. Based on author’s personal experiences while attending two NATO Logistics courses, and NATO School Oberammergau, “Course Catalogue,” last accessed 4 May 2019, <https://www.natoschool.nato.int/Academics/Portfolio/Course-Catalogue?keyword=log&code=&startdate=&enddate=&exactdatematch=False&durationfrom=1&durationto=3084&residentcourse=True&onlinecourse=True&adlmodules=True&department=#92aid-aid>.

¹⁶⁴ The MCCE in Eindhoven, Netherlands, hosts a variety of conferences, workshops and training sessions such as the Joint Airlift Work Shop (JAWS) that provide member nations with required information on programs such as ATARES and SEOS. Major Matthew Wheildon, J4 Movement (Joint Interoperability Movement Cell), Canadian Joint Operations Command, email correspondence with author, 24 April 2019, and Movement Coordination Centre Europe, “Director MCCE,” *Movement Coordination Centre Europe Newsletter*, no. 8, April 2015, 2.

¹⁶⁵ The EATC in Eindhoven, Netherlands provides training opportunities both in-house and online such as the European Air Refuelling Training (EART) and European Tactical Airlift Programme (ETAP), European Air Transport Command (EATC), “Training and Exercises,” last accessed 24 April 2019, <https://eatc-mil.com/en/what-we-do/training-and-exercises>.

personnel that would benefit from the information far exceeds the CAF's capacity to send them to conduct training and attend conferences in a variety of locations in Europe.

Alternate solutions to ensure the widespread sharing of this information should also be considered, such as including an overview and explanation of services and programs that the CAF is involved with in an easily accessible location on the Defence Wide Area Network (DWAN), or via an online learning tool, such as on the Defence Learning Network (DLN). Introductions to this information should also be included on courses and during symposiums where logistics personnel are the captive audiences, such as during the Logistics Officer Course - Common (LOCC), the Movements Officer course, and the Advanced Logistics Officer Course (ALOC).¹⁶⁶

Ensuring that professionals at the tactical levels are aware of the various programs and services available can assist both in critical and creative thinking during expeditionary operations where theater activation and opening activities are still being conducted or initiated upon the arrival of CAF assets and personnel. Personnel at the tactical-level are the CAF's "eyes on the ground," so ensuring that they are familiar with the various ways that capabilities can be leveraged while awaiting for the completion of CAF theatre activation and opening activities can have both strategic and political effects for Canada as a whole.

Conclusion

As per the examples and the explanations given throughout this paper, partaking in external organizations, programs and processes enhance the CAFs ability to meet the

¹⁶⁶ Based on author's personal experiences as a Logistics Officer with over 20 years of military experience, knowledge about external services and organizations as discussed in this paper is not "common-knowledge" amongst most logisticians unless they have worked in a position that had dealings with said services or organizations, and Major Matthew Wheildon, J4 Movement (Joint Interoperability Movement Cell), Canadian Joint Operations Command, email correspondence with author, 28 April 2019.

political and strategic objectives of ensuring a quick military response and of ensuring visibility “on the ground” during expeditionary operations. Utilizing external sources for cooperative support does not hinder, but actually increases timely, flexible, and efficient logistics during the theatre activation and opening activities. This support, although it may come in the form of assistance from other nations forming part of internal agreements and arrangements, will ultimately help support the intent of Canada’s Foreign Policy of being more agile, responsive and present in the face of requests for expeditionary operations.

When the CAF engages in operations as part of an alliance or coalition and is able to be a leader in its responsiveness and ability to operate within a short timeline, it not only achieves the military objectives of being responsive and strengthening its ties with other countries, it also furthers National strategic and political goals; a win on all fronts.

BIBLIOGRAPHY

- Bedard, Martin. Canadian Liaison Officer, NATO Support and Procurement Agency. Email correspondence with author, 9 November 2018.
- Bryson, Rachael *et al.* *Canada in Libya: Strategic Lessons Learned*. Ottawa: Defence Research & Development Canada. 2012.
- Canada. Chief of Review Services, Evaluation of the Canadian Forces Contractor Augmentation Program (CANCAP), 1258-147 (CRS).
- Canada. Department of National Defence, *1994 White Paper on Defence*. Ottawa: DND Canada, 1994.
- Canada. Department of National Defence. “Air Task Force Post Mission Report –OP RENAISSANCE 1301.” (Comd ATF-Philippines). Ottawa: DND, 2014.
- Canada. Department of National Defence, B-GA-400-000/FP-001, *Royal Canadian Air Force Doctrine*, 3rd ed. Ottawa: DND Canada, 2016.
- Canada. Department of National Defence. B-GA-404-000/FP-001, *Canadian Forces Aerospace Move Doctrine*. Winnipeg: Canadian Forces Aerospace Warfare Centre, 2011.
- Canada. Department of National Defence, B-GJ-005-000/FP-001, *Canadian Forces Joint Publication 1.0, Canadian Military Doctrine, 1st ed.* Ottawa: DND Canada, 2009.
- Canada. Department of National Defence, B-GJ-005-000/FP-001, *Canadian Military Doctrine*. Ottawa: DND Canada, 2011.
- Canada. Department of National Defence, B-GL-005-004/FP-001, *Canadian Forces Joint Publication 4-0, Support*, 1st ed. Ottawa: DND Canada, 2016.
- Canada. Department of National Defence. B-GJ-005-404/FP-040, *Joint Doctrine Manual, Movement Support, Air*. Ottawa: DND Canada, 2003.
- Canada. Department of National Defence, B-GJ-005-500/FP-000, *The Canadian Forces Operational Planning Process*. Ottawa: DND Canada, April 2008.
- Canada. Department of National Defence. “Briefing Note for Comd CJOC – ADM(Mat) Engagement in Support of Exceptional Contracting Authority with the NATO Support and Procurement Agency (NSPA).” 3350-1 (J4/RDMIS #473745). Ottawa: DND, 1 November 2018.
- Canada. Department of National Defence, *Canada First Defence Strategy*. Ottawa: DND Canada, 2008.

- Canada. Department of National Defence. *Canadian Forces Joint Operational Support Group Headquarters – Joint Task Force Support Command Concept*. Ottawa: DND Canada, 2010.
- Canada. Department of National Defence. “DND/CF Policy. Directive – Mutual Logistics Support Arrangements.” Ottawa: DND, 7 August 2012.
- Canada. Department of National Defence. “End Tour Report - Task Force Libeccio.” 1630-1 (Comd TF LIB). Ottawa: DND, 7 November 2011.
- Canada. Department of National Defence. *Evaluation of the Canadian Forces Contractor Augmentation Program (CANCAP)*. Ottawa: Chief of Review Services, 2006.
- Canada. Department of National Defence, “Interim Lessons Learned Report – Operation Presence Task Force Mali.” (A7) Belleville: DND, 2018.
- Canada. Department of National Defence, “Interim Policy Direction – Mutual Logistics Support Arrangements.” (RDMIS #42947814) Ottawa: DND, 7 August 2012.
- Canada. Department of National Defence. “OP RENAISSANCE 13-01 Lessons Learned Report..” 3350-OP RENAISSANCE (CFWC A&LL). Ottawa: DND, 5 February 2014.
- Canada. Department of National Defence. *Strong, Secure, Engaged*. Ottawa: DND Canada, 2017.
- Carlson, Dave. J4 Movement, Canadian Joint Operations Command. Email correspondence with author, 9 April 2019.
- Churchill, Winston. *The River War*, Revised Edition. London: Longmans Green, 1902.
- Clausewitz, Carl von. *On War*, ed. and trans. Michael Howard and Peter Paret. Princeton: Princeton University Press, 1984.
- Deb Heinl, Robert. *Dictionary of military and naval quotations*. Annapolis, ML: The U.S. Naval Institute, 1966.
- Defence Terminology Bank (DTB). “Theatre Activation.” Last accessed 29 April 2019. http://www.btb.termiumplus.gc.ca/tpv2alpha/alpha-eng.html?lang=eng&i=1&srchtxt=theatre+activation&index=alt&codom2nd_wet=1#resultrecs.
- European Air Transport Command (EATC). “ATARES.” Last accessed 24 April 2019. <https://eatc-mil.com/en/what-we-do/atares>
- European Air Transport Command (EATC). “The EATC.” Last accessed 24 April 2019. <https://eatc-mil.com/en/who-we-are/the-eatc>

- European Air Transport Command (EATC). "Training and Exercises." Last accessed 24 April 2019. <https://eatc-mil.com/en/what-we-do/training-and-exercises>.
- Fergusson, James. "Over There, From Here: Expeditionary Forces and the Canadian Air Force." paper presented to the Air Symposium, Trenton, Ontario, 2003. https://www.cfc.forces.gc.ca/papers/otherpublications/41_five.pdf.
- Gimblett, Richard. "The Canadian Way of War: Experience and Principles." paper presented to the Seapower Conference 2002. Dalhousie University Halifax, NS, 8 June 2002.
- Goette, Richard. "Command and Control Implications for Canadian Forces Air Expeditionary Operations." Accessed January 24, 2019. https://www.cfc.forces.gc.ca/papers/otherpublications/43_seven.pdf.
- Gongora, Thierry. "The meaning of Expeditionary Operations from an Air Force Perspective." paper presented to the Seapower Conference 2002. Dalhousie University Halifax, NS, 7-9 June 2002.
- Government of Canada. "Canada and the North Atlantic Treaty Organization." Last accessed 22 February, 2019. https://www.international.gc.ca/world-monde/international_relations-relations_internationales/nato-otan/index.aspx?lang=eng.
- Government of Canada. "Justice Laws Website." Last accessed 27 April 2019. <https://laws-lois.justice.gc.ca/eng/regulations/sor-2008-197/index.html>.
- Government of Canada. "OP FREQUENCE." Last accessed 13 April 2019. <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-frequence.html>
- Government of Canada. "Op Presence." Last accessed 13 April 2019. <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/op-presence.html>
- Government of Canada. "Op Reassurance." Last accessed 15 April 2019. <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-reassurance.html>
- Government of Canada. "Operation Renaissance 13-1." Last accessed 9 April 2019. <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/recently-completed/operation-renaissance-13-1.html>

- Government of Canada. "Strategic Joint Staff." Last accessed 4 May 2019. <https://www.canada.ca/en/department-national-defence/corporate/organizational-structure/strategic-joint-staff.html>.
- Joint Chiefs of Staff. Department of Defence. *Doctrine for the Armed Forces of the United States, JP 5 -0*, Vol. 1. Washington, D.C.: Joint Chiefs of Staff, 2011.
- Martel, A. Benmoussa, M. Chouinard, W. Klibi, and O. Kettani. "Designing Global Supply Networks for Conflict or Disaster Support: The Case of the Canadian Armed Forces." *Journal of the Operational Research Society* 64 (2013): 577-596.
- Matlock, Patricia. "Acquisition Cross-Servicing and Mutual Logistics Support in the Pacific." master's thesis, U.S. Army War College, 2009.
- Matsalla, D., and Riviere, D. "Sustainment of Hasty Deployments: Lessons Learned from Op HESTIA." *The Canadian Army Journal* 13, no 3 (Autumn 2010). http://publications.gc.ca/collections/collection_2012/dn-nd/D12-11-13-3-eng.pdf
- Mayne, Dr. Richard Oliver. "The Canadian Experience: Operation Mobile." *AIR WING: RCAF Commanders' Perspectives During the 2011 Libyan Conflict*, (2018).
- Mensah N.K. "The Efficacy of Canadian Armed Forces Contracted Support in Expeditionary Operations." Joint Command and Staff Programme Directed Research Paper, Canadian Forces College, 2014.
- Military Factory. "Naval Forward Log Site Definition (US DoD)." Last accessed 17 January 2019. https://www.militaryfactory.com/dictionary/military-terms-defined.asp?term_id=3622.
- Mills, K.J. "Logistics: Reducing Friction Through Understanding, Integration, and Ownership." Joint Command and Staff Programme Directed Research Paper, Canadian Forces College, 2014.
- Movement Coordination Centre Europe. "Director MCCE." *Movement Coordination Centre Europe Newsletter*, no. 8, April 2015.
- Movement Coordination Centre Europe. "Forward From the Director." *Movement Coordination Centre Europe – MCCE at a Glance*, September 2018, 2.
- Multidimensional Integrated Stabilization Mission in Mali. "About Personnel." Last accessed 13 April 2019. <https://minusma.unmissions.org/en/personnel>.
- Multidimensional Integrated Stabilization Mission in Mali. "Mandate." Last accessed 13 April 2019. <https://minusma.unmissions.org/en/mandate-0>.

- NATO School Oberammergau. "Course Catalogue." Last accessed 4 May 2019. <https://www.natoschool.nato.int/Academics/Portfolio/Course-Catalogue?keyword=log&code=&startdate=&enddate=&exactdatematch=False&durationfrom=1&durationto=3084&residentcourse=True&onlinecourse=True&adlmodules=True&department=#92aid-aid>.
- NATO Support and Procurement Agency. "GPSS." Last accessed 4 April 2019. <https://www.nspa.nato.int/en/organization/logistics/LogServ/gpss.htm>.
- NATO Support and Procurement Agency. "Logistics Operations." Last accessed 2 February 2019. <https://www.nspa.nato.int/en/organization/Logistics/logistics.htm>
- NATO Support and Procurement Agency. "NLSE." Last accessed 29 April 2019. <https://www.nspa.nato.int/en/organization/logistics/LogServ/nlse.htm>
- NATO Support and Procurement Agency. "What is NSPA?" Last accessed 13 April 2019. <https://www.nspa.nato.int/en/organization/nspa/nspa.htm>.
- NATO Support and Procurement Agency. "What is NSPO?" Last accessed 13 April 2019. <https://www.nspa.nato.int/en/NSPO/nspo.htm>.
- Public Works and Government Services Canada. *Annex G Classes of Canadian Naval Ships Fuelling Capacities to NISO – World Wide Fuel for DND*. Halifax: PGWSC, 2017.
- Public Works and Government Services Canada. *Annex H List of Typical Ports by Zone, NISO – World Wide Fuel for DND*. Halifax: PGWSC, 2017.
- Public Works and Government Services Canada. *Appendix A Statement of Work Non-Domestic Fuel Requirements Royal Canadian Navy, NISO – World Wide Fuel for DND*. Halifax: PGWSC, 2017.
- Public Works and Government Services Canada. "Aviation Fuel: Into-plane refuelling services in the Philippines (W8484-148093/01-GRK30)." Last accessed 23 April 2019. <https://buyandsell.gc.ca/procurement-data/award-notice/PW-13-00539801-001>
- Public Works and Government Services Canada. "Definition of Call Up." Last accessed 14 April 2019. <https://buyandsell.gc.ca/for-businesses/selling-to-the-government-of-canada/the-procurement-process/standing-offers>.
- Public Works and Government Services Canada. "FAQ - What are standing offers." Last accessed 14 April 2019. <https://buyandsell.gc.ca/for-businesses/selling-to-the-government-of-canada/the-procurement-process/standing-offers>.
- Public Works and Government Services Canada. *NISO – World Wide Fuel for DND*. Halifax: PGWSC, 2017.

- Public Works and Government Services Canada. “Standard Acquisition Clauses and Conditions (SACC) Manual.” Last accessed 29 April 2019.
<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>
- Royal Canadian Air Force. “CC-177 Globemaster III – Overview.” Last accessed 29 April 2019. <http://www.rcf-arc.forces.gc.ca/en/aircraft-current/cc-177.page>.
- Termium Plus. “Expeditionary Operations.” Last accessed 28 April 2019.
http://www.btb.termiumplus.gc.ca/tpv2alpha/alpha-eng.html?lang=eng&i=1&srchtxt=expeditionary+operation&index=alt&codom2nd_wet=1#resultres
- The Defence Post. “Operation Barhkane.” Last accessed 13 April 2019.
<https://thedefensepost.com/tag/operation-barkhane/>
- United Nations Security Council. *United Nations Security Council Resolution 1973*. New York: UN, 2011.
- Vine, David “Where in the World is the U.S. Military?” Politico Magazine, no. 4 (July-August 2015). <https://www.politico.com/magazine/story/2015/06/us-military-bases-around-the-world-119321>.
- Watson, Mark. “Assistance From Ashore: The Evolution of Naval Logistics Sites From the Korean War to Operation ‘Apollo’.” *Canadian Military Journal*, Vol.13, No. 3 (Summer 2013).
- Wheildon, Matthew. J4 Movement (Joint Interoperability Movement Cell), Canadian Joint Operations Command. Email correspondence with author, 24 April 2019.