

Canadian
Forces
College

Collège
des
Forces
Canadiennes



THE RIGHT CAPABILITY FOR HUMANITARIAN ASSISTANCE DELIVERY: A ROYAL CANADIAN NAVY'S PERSPECTIVE

Lieutenant-Commander Vicky Marier

JCSP 46

Master of Defence Studies

Disclaimer

Opinions expressed remain those of the author and do not represent Department of National Defence or Canadian Forces policy. This paper may not be used without written permission.

© 2020. Her Majesty the Queen in Right of Canada, as represented by the Minister of National Defence. All rights reserved.

PCEMI 46

Maîtrise en études de la défense

Avertissement

Les opinions exprimées n'engagent que leurs auteurs et ne reflètent aucunement des politiques du Ministère de la Défense nationale ou des Forces canadiennes. Ce papier ne peut être reproduit sans autorisation écrite.

© 2020. Sa Majesté la Reine du Chef du Canada, représentée par le ministre de la Défense nationale. Tous droits réservés.

CANADIAN FORCES COLLEGE/COLLÈGE DES FORCES CANADIENNES

JCSP 46 – PCEMI 46
2019 - 2020

MASTER OF DEFENCE STUDIES / MAÎTRISE EN ÉTUDES DE LA DÉFENSE

**THE RIGHT CAPABILITY FOR HUMANITARIAN ASSISTANCE DELIVERY:
A ROYAL CANADIAN NAVY'S PERSPECTIVE**

By Lieutenant Commander V. Marier
Par la capitaine de corvette V. Marier

“This paper was written by a student attending the Canadian Forces College in fulfilment of one of the requirements of the Course of Studies. The paper is a scholastic document, and thus contains facts and opinions, which the author alone considered appropriate and correct for the subject. It does not necessarily reflect the policy or the opinion of any agency, including the Government of Canada and the Canadian Department of National Defence. This paper may not be released, quoted or copied, except with the express permission of the Canadian Department of National Defence.”

« La présente étude a été rédigée par un stagiaire du Collège des Forces canadiennes pour satisfaire à l'une des exigences du cours. L'étude est un document qui se rapporte au cours et contient donc des faits et des opinions que seul l'auteur considère appropriés et convenables au sujet. Elle ne reflète pas nécessairement la politique ou l'opinion d'un organisme quelconque, y compris le gouvernement du Canada et le ministère de la Défense nationale du Canada. Il est défendu de diffuser, de citer ou de reproduire cette étude sans la permission expresse du ministère de la Défense nationale. »

Word Count: 21,355

Nombre de mots : 21,355

TABLE OF CONTENTS

Table of Contents	i
List of Tables and Figures	ii
Abstract	iii
Acknowledgements	iv
Chapter	
1. Introduction	1
2. Evolution of Defence Policy and RCN Humanitarian Assistance Since 1959	4
3. Humanitarian Assistance & Other Navies Capabilities	76
4. Recommendations and Conclusion	83
Bibliography	89

TABLES

Table 2.1: Canadian Expenditures on Projects 1960-65	16
Table 2.2: Percentage Distribution of Development Assistance by Region	30
Table 2.3: ALSC Capabilities, Levels of Employment, and Scenario	48
Table 2.4: Average Natural Disasters per Year Over 38 Years	50
Table 2.5: Subject Matter Experts – Proposed Fleet Compositions	63
Table 2.6: Fleet Option Risk Comparison	64
Table 3.1: Humanitarian Assistance Vessels in Other Navies	79

FIGURES

Figure 2.1: HMCS <i>Magnificent</i> - United Nations Emergency Force	10
Figure 2.2: Relief Efforts at Eluthra, Bahamas	36
Figure 2.3: Number of Recorded Natural Disaster Events, all Natural Disasters	49
Figure 2.4: Personnel Operational Tempo 1980 - 2004	53
Figure 2.5: <i>Sea King</i> Delivering Humanitarian Aid in Haiti 2008	60

ABSTRACT

This paper starts with a question: how did Canada, through its defence policy, ever gotten involved with the procurement of humanitarian assistance (HA) and how did it come about that the Royal Canadian Navy (RCN) assets were ever utilised to provide such assistance? Moreover, while the RCN warships were slowly introduced to provide HA worldwide, were the right assets ever provided to fulfil such missions? As a follow on question, if these assets did not present the capability required for such missions, were there other instances since 1959 where the RCN warships were involved in operations, but their capabilities were ill suited for the tasks? If so, are there any possibilities that Canada could learn from past mistakes and provide the RCN with the right capability to deliver HA when the call of duty arises? There is certainly so. This is what this paper is all about: presenting a synopsis of Canada's defence policy since 1959, and its involvement with providing HA, with the eventual inclusion of the RCN for the delivery of HA. It also demonstrates that although the RCN has been involved in alleviating the pain and suffering of those most affected for the past three decades, that the capabilities used have not always been commensurate with the disasters at hand, and that Canada must invest now in the right capability for HA delivery. Learning from the past may be the only way to shape the future.

ACKNOWLEDGEMENTS

I would like to extend my sincere thanks and gratitude to the following individuals who have supported me throughout this process: Ms. Andrea Lane, my thesis advisor, for her guidance; Dr. Craig Stone and Dr. Adam Chapnick for their support in my research; Ms. Cathy Murphy for her insightful direction on past and present government documents; and most importantly my friends and family for their supported throughout this process.

I must also acknowledge and offer my sincerest thanks to Major-General Hercule Gosselin, OMM, MSM, CD, for his mentorship, and unrelenting support and advice while serving under him as a Staff Officer from June 2018 to July 2019. Major-General Gosselin, Chief of Programme, is one of the finest senior officer I have ever met and worked for. He emulates unprecedented leadership, dedication, and devotion to others; as a result, I am a much better officer because of him. I am forever grateful.

CHAPTER 1 - INTRODUCTION

INTRODUCTION

This chapter starts with a question: how did Canada, through its defence policy, ever gotten involved with the procurement of humanitarian assistance (HA) and how did it come about that the Royal Canadian Navy (RCN) assets were ever utilised to provide such assistance? Moreover, while the RCN warships were slowly introduced to provide HA worldwide, were the right assets ever provided to fulfil such missions? As a follow on question, if these assets did not present the capability required for such missions, were there other instances since 1959 where the RCN warships were involved in operations, but their capabilities were ill suited for the tasks? If so, are there any possibilities that Canada could learn from past mistakes and provide the RCN with the right capability to deliver HA when the call of duty arises? There is certainly so. This is what this paper is all about: presenting a synopsis of Canada's defence policy since 1959, and its involvement in providing HA, with the eventual inclusion of the RCN for the delivery of HA. It also demonstrates that although the RCN has been involved in alleviating the pain and suffering of those most affected for the past three decades, that the capabilities used have not always been commensurate to the disasters at hand, and that Canada must invest now in the right capability for HA delivery. Learning from the past may be the only way to shape the future.

Since 1959, there have been several iterations of defence policy in Canada, with each policy bringing different strategic opportunities and concerns, depending on the environment faced by Canada, North America, and abroad. In 1959, Canada was most notably preoccupied with the end of World War II (WWII) and the fear that an attack from the Union of Soviet Socialist Republics (USSR) with nuclear warhead could transpire. Therefore, bolstering the navy with Anti-Submarine Warfare (ASW) capabilities was of highest importance. This fear of a

Soviet submarine attack with nuclear warheads lasted in Canada until 1990, basically until the end of the Cold War, the uniting of East and West Germany, and the dissolution of the Soviet Union occurred. The navy had never really been used until this point to assist in HA efforts, with the exception of the assistance of Her Majesty's Canadian Ship (HMCS) *Cape Scott* in 1970 when the tanker *Arrow* went aground in Chedabucto Bay on 4 February. It was after the 90s that the navy saw a demand for the delivery of HA. But were the ships utilized suited to provide such assistance? The answer is no. For example, in 1999, HMCS *Protecteur* was deployed in East Timor as part of *Operation Toucan* to assist in the reconstruction efforts in Dili, although her lack of vital capabilities such as the ability to reach ship to shore through beach landing vehicles lessened her control over national movements and sustainment capability as demonstrated when HMAS *Tobruk* was required to transport cargo and troops from a few countries, including Canada during the mission in East Timor. Unfortunately, this was not the first time that Canada was deploying a sub-standard capability for the provision of effects. When Canada purchased the Oberon-class submarines in the early 60s, the country had new submarines, but incapable of deterring Soviet arsenals.

A few attempts have been put forth to acquire a multi-roles vessel to procure assistance in crisis, but all have faltered. In 1999, a research was conducted for the acquisition of a multi-role capability known as the Afloat Logistics and Sealift Capability (ALSC) since there was a requirement to eventually replace the aging Auxiliary Oiler Replenishment (AOR) ships, and that a platform with sealift, and support to shore capability was deemed critical for the next fleet mix.¹ Similarly, in the 2007-2008 time frame, another technical report was completed, the Fleet

¹ Robert M.H. Burton, and Paul L. Massel, "Afloat Logistics and Sealift Capability, Volume I: Simulation-Based Fleet Sizing, *Operational Research Division*, (Ottawa, ON: Department of National Defence, 2001), 1.

Mix Study Iteration II. The aim of this study was to explore a specified set of fleet options, based on future ship concepts, namely the Chief of Maritime Staff's "Target" fleet, and the Canada First Defence Strategy (CFDS) fleet, while minimizing political risk.² In the end, the results for both the 1999 research and the 2007-2008 technical report analysis were ultimately ignored.

This paper will demonstrate in chapter two that throughout the years, what the navy obtained in naval procurement was not always commensurate to what the navy required, but reflected the political party desires, leaving therefore a sub-standard capability to respond to challenges at hand. In chapter 3, the paper will show that several navies have switched to a capability adapted to the 21st Century, and that there are several options that Canada could adopt for the procurement of a multi-role vessel capable of not only support HA operations, but a multitude of other joint missions; a critical element for future deployments. Lastly, this paper will provide some recommendations and a conclusion that if Canada does not acquire now a one- or more multi-roles vessels, Canada will certainly find itself at the mercy of others when the call of duty arises.

Although climate change is a crucial element for HA, the subject will not be explored in details in this paper, though the idea behind acquiring multi-roles vessels should take into consideration climate change and the fact that HA are often derived from natural and man-made disasters. Canada must be ready to respond to these disasters at home and abroad, and that not in 20 years, but now.

Lastly, although the Disaster Assistance Response Team (DART) is a prominent team

² Alex Bourque, and Cheryl Eisler, "Fleet Mix Study Iteration II: Making the Case for the Capacity of the "Navy After Next"," *Defence R&D Canada: Center for Operational Research and Analysis*, (Ottawa, ON: Defence Research and Development Canada, 2010): iii.

capable of deploying within 48 hours after a disaster has struck somewhere in the world, neither the team's capabilities, nor the HA deployments will be discussed in this paper, though the idea of integrating the DART in missions involving the multi-roles vessels should be part of further researches.

CHAPTER 2 - EVOLUTION OF DEFENCE POLICY AND RCN HUMANITARIAN ASSISTANCE SINCE 1959

INTRODUCTION

Since 1959, there have been several iterations of defence policy in Canada: starting with Defence 1959, followed by the White Paper on Defence in 1964, the White Paper on Defence in 1970, the Defence Policy for Canada in 1987, the Canadian Defence Policy in 1992, the Defence White Paper in 1994, the Canada's International Policy Statement in 2005, the *Canada First Defence Strategy* in 2008, and finally, the Canada's Defence Policy – *Strong, Secure, Engaged* – in 2017. Each policy brought with it different strategic opportunities and concerns, depending on the environment faced by Canada, North America, and abroad. Climate change and humanitarian assistance (HA) concerns appeared in Canada's Defence Policy and White Papers gradually, at a pace proportional to Canada and the world's evolving view of current and future threats. As such, the Royal Canadian Navy (RCN) has evolved gradually to respond to HA, although not always commensurate to the capability required for HA responses. The evolution of the Defence Policy and White Papers since 1959, along with the evolution of the RCN and HA are discussed in the following section.

1959 – Canada’s Defence Policy

Canada’s Defence Policy in 1959 was marked by the end of World War II and the fear of an attack from the Union of Soviet Socialist Republics (USSR) with nuclear warhead.

Accordingly, it was imperative that Canada maintain strong relationships with the US and Western Europe for the purpose of guaranteeing their mutual defense³, and with the UN for the maintenance of peace. As such, in order to meet the objectives of the Alliance and in support of the UN, Canada provided forces for the defence against an attack on the North American continent; the collective defence and deterrent forces of NATO in Europe and the North Atlantic; [and] the UN to assist that organization in attaining its peaceful aims.⁴

Canada joined NATO in April 1949, along with Belgium, France, Luxembourg, The Netherlands, the United Kingdom, and the US as a means to promote stability and well-being in the North Atlantic area, and to resolve to unite their efforts for collective defence and for the preservation of peace and security in the world.⁵ Collective defence is conveyed in Article 5 as:

The Parties agree that an armed attack against one or more of them in Europe or North America shall be considered an attack against them all and consequently they agree that, if such an armed attack occurs, each of them, in exercise of the right of individual or collective self-defence recognised by Article 51 of the Charter of the United Nations, will assist the Party or Parties so attacked by taking forthwith, individually and in concert with the other Parties, such action as it deems necessary, including the use of armed force, to restore and maintain the security of the North Atlantic area.⁶

³ James P. Warburg, “How Useful Is NATO?” *The Annals of the American Academy of Political and Social Science* 330, no. 1 (July 1960): 133, doi:[10.1177/000271626033000129](https://doi.org/10.1177/000271626033000129).

⁴ Department of National Defence, *Defence 1959* (Ottawa: Queen’s Printer and Controller of Stationary, 1959), 5.

⁵ Arthur E. Blanchette, *Canadian Foreign Policy, 1945-2000: Major Documents and Speeches* (Toronto: Golden Dog Press, 2014), 48.

⁶ North Atlantic Treaty Organization, “The North Atlantic Treaty: Washington D.C. – 4 April 1949,” last modified 10 April 2019, https://www.nato.int/cps/en/natolive/official_texts_17120.htm.

In 1959, with the ascension of the technological advances of guided missiles, and the modernization of the USSR's land, air, and sea forces *vis-à-vis* ballistic missiles, Canada's engagement in Europe and the North Atlantic was paramount to deter, along with NATO, possible Soviet aggressions. In order to ensure the integrity of the NATO area, Canada provided NATO with ground and air forces, projecting a collective deterrent of war.⁷ Furthermore, due to the ambiguity of the future threats, Canada undertook to provide to the NATO Supreme Allied Commander, Atlantic (SACLANT) 30 RCN ships should an emergency arise.⁸

By 1959, Canada's navy was quite significant. For the defence of Canada, 7 destroyer escorts, 8 frigates, and 4 minesweepers were located on the West coast while 1 aircraft carrier, 13 destroyer escorts, 5 frigates, 6 minesweepers, and 1 repair ship were positioned on the East coast.⁹ Although some of the destroyer escorts and frigates dated from pre-World War II, and others were more recent, they all had the same purpose, deterring Soviet submarine capabilities, although serious capability gaps existed. First and foremost, while the Soviet submarines nuclear-tipped missiles could reach targets at a distance of 200 miles, Canadian destroyers' hull-mounted sonars and anti-submarine weapons were too short-ranged to cope effectively with even conventionally powered submarines.¹⁰ Second, as the Soviet nuclear submarines were able to maintain speeds of 20 knots indefinitely in all weather, destroyers could only attain 27 knots, putting them at risk of Soviet attacks.¹¹ In order to fill some of these gaps, the RCN designed fewer but better ships, transformed some destroyer escorts into destroyer helicopter escorts, developed far reaching variable depth sonar such as the Canadian Asdic Search Towed model

⁷ Department of National Defence, *Defence 1959 . . .*, 8.

⁸ *Ibid.*

⁹ *Ibid.*, 34.

¹⁰ Marc Milner, *Canada's Navy: The First Century*, 2nd ed. (Toronto; Buffalo, NY: University of Toronto Press, 2009), 222.

¹¹ *Ibid.*, 223.

IX(CAST/IX)¹², and adopted the Mk 44 torpedo (launched by torpedo tubes), but the new generation of deeper-diving, faster and quieter Soviet Union submarines were too powerful for the RCN new capabilities.¹³ From early 1955, Vice Admiral Brian Spencer recommended that Canadian industry build nuclear-powered submarines as the weapon of choice to deter Soviet submarines, although at a price tag of 65 million dollars, the cost was deemed too hefty for Canada to endorse.¹⁴ Instead, Canada opted for the purchase of three Oberon-class submarines for a total price of 27 million dollars, even if these conventional submarines lacked the technology, endurance, and speed of the Soviet submarines.¹⁵ In the end, Canada wanted a fleet of submarines as a means to deter Soviet submarines, regardless of their capacity to fight, and at the lowest cost.

Canada joined, along with 50 other countries, the UN in 1945 as a means to maintain international peace and security. Canada strongly believed that the magnitude of the Canadian contribution to the Allied war effort warranted her with a fair representation in the Alliance. As the Canadian High Commissioner in London, Mr. Vincent Massey, expressed in his speech:

The contribution of all the other United Nations except the four Great Powers is far less than ours.... Our war effort, therefore, and our contribution to post-war needs, entitle us to a place quite unlike that of any other state, and we hope this will be recognized in concrete form.¹⁶

¹² John R. Longard, *Knots, Volts and Decibels: An Informal History of the Naval Research Establishment, 1940-1967*, (Dartmouth: Defence Research Establishment Atlantic, 1993), 74.

¹³ Jane's Air-Launched Weapons, "Mk 44 Lightweight Torpedo," last modified 15 January 2006, <https://janes.ihs.com/Janes/Display/jalw3117-jalw>.

¹⁴ Michael Alphonsus Hennessy, "The Rise and Fall of a Canadian Maritime Policy, 1939-1965: A Study of Industry, Navalism and the State," Order No. NQ38348, University of New Brunswick (Canada), 1995, <https://search.proquest.com/docview/304221000?accountid=9867>.

¹⁵ *Ibid*, 349.

¹⁶ D. J. Goodspeed, *The Armed Forces of Canada, 1867-1967: A Century of Achievement*, (Ottawa: Directorate of History, Canadian Forces Headquarters, 1967), 238.

In the creation of the Charter of UN, Canada played a vital role, notably in matters of security. In 1945, as the proposed Charter provided the Security Council of the new organization with wide powers in all matters of collective security, including the right to employ the Armed Forces of member states without their consent, Prime Minister Mackenzie King proposed that consultation be sought first.¹⁷ As a result, the Charter was amended and included a guarantee of the right of consultation.¹⁸

In 1956, as the Suez Crisis developed, Canada enacted the United Nations Emergency Force (UNEF) as a means to bring about and secure a cease-fire in Egypt.¹⁹ The crisis resulted from the Egyptian government's desire to nationalize the Suez Canal and utilize the funds to fund the Aswan High Dam project after both the US and Britain declined to provide funding.²⁰ In order to bring about a cease-fire and to resolve the conflict without military aggressions, Canada, as part of the UNEF, provided the Alliance with troops, aircrafts, and an aircraft carrier, HMCS *Magnificent*, for the transportation of supplies and equipment.²¹ HMCS *Magnificent* would also

¹⁷ *Ibid*, 239.

¹⁸ *Ibid*.

¹⁹ James Eayrs, "Canadian Policy and Opinion during the Suez Crisis," *International Journal* 12, no. 2 (Spring, 1957): 100, <https://search.proquest.com/docview/1290325934?accountid=9867>.

²⁰ Jeff Hulbert, "Right-Wing Propaganda or Reporting History? - the Newsreels and the Suez Crisis of 1956," *Film History* 14, no. 3 (2002): 263, <https://search.proquest.com/docview/219825070?accountid=9867>; Hesham Abd-el Monsef, Scot E. Smith, and Kamal Darwish, "Impacts of the Aswan High Dam After 50 Years," *Water Resources Management* 29, no. 6 (04, 2015): 1875, doi:<http://dx.doi.org/10.1007/s11269-015-0916-z>. <https://search.proquest.com/docview/1660323569?accountid=9867>; F. R. C. Bagley, "Egypt Under Nasser," *International Journal* 11, no. 3 (Summer, 1956): 201, <https://search.proquest.com/docview/1290394166?accountid=9867>; "Notes and Comments. The Suez Canal Crisis," *The Political Quarterly* 27, no. 4 (1956): 364, <https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1467-923X.1956.tb01351.x>; Barnaby Crocroft, "Egypt's Other Nationalists and the Suez Crisis of 1956," *The Historical Journal* 59, no. 1 (03, 2016): 255, <https://search.proquest.com/docview/1763382655?accountid=9867>. The High Dam project was to provide Egypt with long-term protection against drought and floods, and the production of electricity, but at a cost of £E200,000,000, the Dam was deemed too hefty for the government of Egypt to finance. Nationalizing the Suez Canal was a means Egypt thought practical in financing the High Dam, but as the Suez Canal had been constructed at a time that Egypt was not a sovereign, independent state, Egypt had no rights to the Canal. In facing such act, the forces of Israel, Britain and France invaded Egypt in late October 1956, escalating the crisis.

²¹ Goodspeed, *The Armed Forces of Canada . . .*, 249.

accommodate a small hospital and force headquarters for the forces deployed.²² As depicted in Figure 2.1, during the Suez Crisis, HMCS *Magnificent* transported to Port Said 406 troops, 233 vehicles, 4 Royal Canadian Air Force (RCAF) de Havilland DHC-3 Otters and one helicopter.²³ Although *Magnificent* was deficient in her capability to deliver vehicles and troops directly from the sea with specialized ships, as would an amphibious vessel, she provided nonetheless an effective means of bringing power rapidly in time of crisis. The relief she provided to UNEF helped to subside the conflict and brought about an eventual peaceful resolution.

Providing assets to help in settling conflicts, such as with the Suez Crisis, was one way Canada distinguished herself in providing relief, but Canada also provided aid in the form of Mutual Aid, through the Mutual Aid Act, during and after the Second World War. The Mutual Aid Act, which came into effect on 20 March 1942, had the purpose of distributing Canada's war production among the nations where the strategy of war demanded their use in the common cause and to make the effective use of this production possible.²⁴ Although some would argue that distributing munitions, guns, aluminium, copper, explosives, military assets, and food supplies to Europe under the Mutual Aid program was not considered a pillar of humanitarian aid, the link between defence and the creation of employment in Canada proved different. The Mutual Aid program not only helped in reducing the unemployment rate, but as well contributed to the increased prosperity in Canada. As echoed by Hector Mackenzie, "In the final quarter of 1943, 'industrial production and employment in industry [in Canada] reached the highest level in

²² *Ibid.*

²³ "Maggie Delivers Peacekeepers to the Suez Canal," *Legion Canada's Military History Magazine*, last accessed 11 January 2019, <https://legionmagazine.com/en/2019/01/maggie-delivers-peacekeepers-to-the-suez-canal/>.

²⁴ Morris McDougall Staff Correspondent of the Christian, Science Monitor, "Canada's Mutual Aid Exports to United Nations \$912 Million: French Aid Not Shown Other Contributions," *The Christian Science Monitor (1908-Current File)*, Jun 15, 1944, <https://search.proquest.com/docview/514412022?accountid=9867>.



Figure 2.1 – HMCS *Magnificent* en route to Port Said with men and materiel for the United Nations Emergency Force.

Source: Department of National Defence Photo - D. J. Goodspeed, *The Armed Forces of Canada, 1867-1967: A Century of Achievement*.

history.' Even after the peak had passed, more than 260,000 people were employed in manufacturing munitions and war equipment."²⁵

The Mutual Aid program did not falter after the war, although it became less significant as the needs for war materiel and equipment diminished. In 1959-60, the provision for direct expenditures chargeable to Mutual Aid amounted to \$90,000,000 as compared to \$130,000,000

²⁵ Hector Mackenzie, "Sinews of War and Peace: The Politics of Economic Aid to Britain, 1939-1945," *International Journal* 54, no. 4 (Fall, 1999): 655, <https://search.proquest.com/docview/220845683?accountid=9867>.

in 1958-59.²⁶ The difference was attributed mainly to a reduction of transfers of equipment from the Service stocks and from direct production.²⁷

After the Second World War, as the Mutual Aid programme, the naval budget was also progressively reduced. By 1961, the budget amounted to \$271.3 million as compared to \$326.3 million in 1957.²⁸ During this time period, as the Soviet submarines became increasingly sophisticated, a greater amount of attention had to be devoted to improving the ASW capabilities of the fleet, but as the naval budget remained restrained, finding economies elsewhere was key. As such, the strength of the naval reserve was reduced, and more ships were kept on coastal patrol for longer periods of time, allowing their required maintenance to slip.²⁹ While economies were generated to develop new and better technology for the ASW, and although new and more powerful ships from the Mackenzie and the Annapolis Class were about to be delivered, and that the building of eight General Purpose Frigates (GPF) was approved in 1962 to reinforce the RCN capability, more would be required to replace twenty-six aging Canadian war ships by 1970.³⁰ Bolstering the RCN was key to close some commitment gaps, most notably with SACLANT and the US, and to uphold the Canadian position in the Alliance. Although in 1964, Lester Pearson, the newly appointed Prime Minister, and Paul Hellyer, the new minister of national defence, had their own agenda, which brought about the navy to its lowest point since WWII.

²⁶ Department of National Defence, *Defence 1959 . . .*, 23.

²⁷ *Ibid*, 23-24.

²⁸ Hennessy, "The Rise and Fall of a Canadian . . .", 339.

²⁹ *Ibid*, 342-343. These were not the last cuts the navy effected. Both cruisers, HMCS *Ontario* and *Québec*, were disposed of even if they were promised to SACLANT for operations in the eastern Atlantic, the navy's only ice-breaker HMCS *Labrador* was transferred to the Department of Transport, and participations to ASW barrier in eastern Atlantic was declined so that Canadian ships would remain on the western Atlantic.

³⁰ The Crowsnest, *The Royal Canadian Navy's Magazine* 15, no. 8 (August, 1963): 10, <http://www.readyayeready.com/crowsnest/issue.php?year=63&month=08>. Vice-Admiral H.S. Rayner, Chief of the Naval Staff, appeared before the House of Commons special committee on defence on 9 July 1963 to present the State of the RCN. The Crowsnest published this presentation, considering the requirement to replace the 26 aging war ships by 1970.

1964 – White Paper on Defence

The White Paper of 1964 was based on a need to re-organize the Canadian Forces into unification of the tri-services as WWII and the Cuban missile crisis of 1962 had harmed the Canadian economy. Economy of effort was sought as maintaining common functions in each service was uneconomic.³¹ In 1963, only 16.3 per cent of the defence budget went to equipment as compared to 32.5 per cent in 1956 as the major problem facing the Armed Forces in 1963 was a lack of money to replace equipment.³² As such, in amalgamating the services, Hellyer sought an opportunity to reduce defence expenditures while making the Armed Forces and the administration as a whole more efficient.

The first report of the Glassco Royal Commission on Government Organization was imperative in leading Hellyer's action towards unification. The report, published in September 1962, was essentially a means to streamline organizations and methods of operation of the departments and agencies of the Government of Canada to best promote efficiency, economy and improved service in the dispatch of public business.³³ From this report, Hellyer saw a means to integrate all aspects of planning and operations not only to produce a more effective and coordinated defence posture for Canada, but as well to achieve savings; savings vital to making funds available for the purchase of capital equipment for the army, air force and navy.³⁴

³¹ Paul Hellyer and Canada, Department of National Defence, *White Paper on Defence*, (Ottawa: R. Duhamel, 1964), 17.

³² Vernon J. Kronenberg, *All Together Now: The Organization of the Department of National Defence in Canada 1964-1972*. Vol. 3/1973, (Toronto: Canadian Institute of International Affairs, 1973), 23.

³³ Donald C. Rowat, "Canada's Royal Commission on Government Organization." *Public Administration* 41, no. 2 (1963): 193-197.

³⁴ Hellyer and Canada, Department of National . . . , 19; Wilfred Gourlay Dolphin Lund, "The Rise and Fall of the Royal Canadian Navy, 1945-1964: A Critical Study of the Senior Leadership, Policy and Manpower Management," last modified 1 December 2017, <https://dspace.library.uvic.ca/handle/1828/8828>. As such, as part of the re-organization plan, the Naval Board and Staff was disbanded on 1 August 1964, the day the White Paper on Defence received Royal Assent.

Aside from the re-organization, the navy did not escape the cutbacks announced in the White Paper, as such, on 10 October 1964, the GPF program was cancelled. A further reduction was released on 5 December 1964 calling for the paying off of 3 Tribal class destroyers, 10 minesweeping ships, 10 auxiliary vessels, and the mobile repair ship *Cape Breton*.³⁵ The summer training establishment HMCS *Acadia* for cadets along with 7 naval reserve divisions were closed, reserve officer cadet training in universities was reduced by about 50 per cent, and the strength of the RCN reserve and regular force was reduced to 2,700 and 20,700 respectively.³⁶ The cutbacks had begun, bringing with them an impediment to carrying a strong naval posture as part of the Alliance, NATO and the US, and for the defence of Canada.

Although cutbacks were inevitable in the early 1960s, an appetite still existed in the navy to bolster the fleet by twenty-six replacement ships to counter the anti-submarine warfare (ASW) threat that was still present, and to fulfill our commitment to NATO. In 1962, a research on the navy's future roles indicated that the prime purpose of the force was to deter, and to prevent war rather than fight one.³⁷ This meant that Canada needed to bolster her naval force with no more than a token effort to form part of the strategic reserve of the Free World for the deterrence of war.³⁸ As such, it became inevitable for Canada in 1964 to develop a defence strategy that would lay in collective arrangements, that of "collective measures" as embodied in the UN; "collective defence" with NATO; "partnership" with the US for defence; and "national measures" for

³⁵ The Crownsnest, *The Royal Canadian Navy's Magazine* 15, no. 12 (December, 1963): 5, <http://www.readyayeready.com/crownsnest/issue.php?year=63&month=12>. Vice-Admiral H.S. Rayner, Chief of the Naval Staff, appeared before the fleet and announced the cutback for the navy.

³⁶ *Ibid*, 6.

³⁷ R. J. Sutherland, "Canada's Long Term Strategic Situation," *International Journal* 17, no. 3 (September 1962): 216, doi:10.1177/002070206201700301.

³⁸ *Ibid*, 219.

domestic defence.³⁹ Canada would continue to deter war through partnerships and be of assistance to NATO through its “mixed” force of modest size. This mixed force would be an addition to other navies in solidarity and as a means to deter the threat at the time, that of Soviet nuclear submarines.

Though the navy had felt the repercussion of cutbacks in 1964, some of the naval procurements and ships modernization, which started in 1958, began to appear. For example, by November 1963, the replenishment ship, HMCS *Provider*, had been commissioned along with four Mackenzie-class ships, and the two St Laurent-class DDH, *Assiniboine* and *St Laurent*, had been modernized. Moreover, two Annapolis-class ships were to be commissioned by late 1964, and HMCS *Ottawa*’s modernization program was a few months from completion. Additionally, HMCS *Ojibwa*, the first of the RCN’s new submarines, was to join the fleet in 1965 along with three modernized St Laurent-class DDH, *Saguenay*, *Skeena*, and *Margaree*. Although there were reasons to celebrate the entrance of these new and modernized capabilities in the RCN, in 1964 the navy had been depleted from 24 ships and vessels, leaving its destiny to the deterrence of war through partnerships rather than independent warfighting. In fact, it would take three decades for the navy to reach some sort of balance. The stringent gap established for the RCN in 1964 would leave unprecedented consequences for the defence of Canada and affect Canada’s contributions with NATO partners for years to come.

In the mid-1960s, Canada’s collective measures as embodied in the UN did not only encompass a defence strategy, but as well a mechanism to bolster Canada’s humanitarian aid abroad through the External Aid Office (EAO), principally in Asia, the Caribbean, and Africa.

³⁹ Douglas L. Bland, *Canada’s National Defence, Volume 1: Defence Policy* (Kingston: School of Policy Studies, Queen’s University, 1997), 59.

The EAO was officially announced on 1 September 1960 and had the mandate of strengthening Canada's long-term diplomacy through aid.⁴⁰ Aid was perceived in Canada, like in other developed countries, as a shared responsibility to assist the economic and social development of less fortunate peoples and states.⁴¹ Humanitarian aid was also perceived as a means to deter the spread of communism. As Gendron states, "in the midst of the intensification of the Cold War of the early 1960s, the Canadian government and its officials (*sic*) appreciated the importance of aid in the struggle to contain the spread of communism in Africa and elsewhere in the developing world."⁴² As such, from 1960-65 and as depicted in Table 2.1, Canada enabled several projects in Asia, the Caribbean, and in Africa as part of her humanitarian relief program. Altogether during this period, Canada provided more than \$111 million in aid. Although this kind of aid was unlike the Mutual Aid program developed after the Second World War, it co-ordinated Canadian efforts into providing assistance to undeveloped countries, and contributed to the strengthening of Canada's foreign policy.

When Pierre Elliott Trudeau came to power in 1968, the relief program continued in force, but under the Canadian International Development Agency (CIDA), replacing the EAO. Under the Liberal government, Ottawa was committed to help unprivileged nations improve their economies through development, although this aid would come with a price tag: expanding Canadian trade, commerce, and business.⁴³ The *White Paper on Defence 1971* in the next section relates to this topic as well as the RCN development under Trudeau.

⁴⁰ Keith Spicer, *A Samaritan State? External Aid in Canada's Foreign Policy*, (University of Toronto Press, 1966), 107.

⁴¹ R. S. Gendron, Canada's University: Father Levesque, Canadian aid, and the National University of Rwanda, *Historical Studies*, 73 (2007): 74.

⁴² *Ibid*, 75.

⁴³ Stefano Tijerina, "Canadian Official Development Aid to Latin America: The Struggle Over the Humanitarian Agenda, 1963–1977," *Journal of Canadian Studies/Revue D'Études Canadiennes* 51, no. 1 (2017): 229.

Table 2.1 - Canadian Expenditures on Projects 1960-65

Canadian dollars				
Projects	Asia	Caribbean	Africa	Sum Total
Power and irrigation	\$ 50,101,349	\$ 405,000	\$ 15,000	\$ 50,521,349
Communications and Transport	9,127,750	7,390,895	550,703	17,069,348
Natural resources	8,565,361	524,987	5,775,494	14,865,842
Health, welfare and education	14,859,095	2,355,754	1,752,413	18,967,262
Industry	9,849,734	-	-	9,849,734
Total: Projects	\$ 92,503,288	\$ 10,676,636	\$ 8,093,610	\$ 111,273,534

Source: Spicer, *A Samaritan State? External Aid in Canada's Foreign Policy*, (University of Toronto Press, 1966), 126-171.

1971 – White Paper on Defence

The *White Paper on Defence 1971* distinguished itself by the degree to which it predicted the CAF would be used in the coming years. While the White Paper of 1964 was based on cost saving, flexibility, and a need to integrate and unify the Armed Forces, the *White Paper on Defence 1971* would reduce the CAF into a military organization left for the home front, leaving little room for NATO commitments and for international peacekeeping operations. Although there was an appetite to reduce defence budget during Trudeau's era, budget for international aid expanded. An opportunity to increase trade with the Third World, Latin America, and the Caribbean existed, and so Trudeau broadened Canada's development opportunities to further national interests. In Latin American and Caribbean regions, Trudeau recognized that external aid could increase exports and imports between Canada and these regions.⁴⁴ As such, a greater emphasis was provided to international aid.

⁴⁴ *Ibid*, 230.

The navy of the 70s contrasted significantly with that of the early-1960s. While in 1963 the RCN had forty-four major warships, by 1971, the navy fleet was reduced to only 23 warships; an amount commensurate with the previous government's goal.⁴⁵ While integration and unification in the mid-1960s was supposed to bring about savings in order to pay for new equipment and major investments, operational tasks and inflation had eroded the purchasing power for new investments, and so the fleet expansion suffered as a consequence.

When Pierre Elliott Trudeau became prime minister in 1968, the way forward for the navy became evident. The RCN would be reduced to a general purpose maritime forces, most notably in the realm of surveillance and control for the protection of Canada's maritime interests.⁴⁶ This alteration of purpose was a complete reverse of the defence policy under Prime Minister Pearson where the RCN's purpose was defined as an anti-submarine warfare role. As Trudeau did not believe a nuclear war would come about due to the devastating effect this would create on Earth, the RCN was reduced to a modest national role. In contrast, Trudeau believed that should there be a thermonuclear attack, the RCN destroyers would get defeated due to their meager defence against Soviet nuclear submarines, so investment for the RCN was negligible and amounted to a Destroyer Extension Life Expectancy Programme (DELEX) aimed at squeezing a few more years out of the rusting hulks the navy operated.⁴⁷ By this reasoning, it became evident that Trudeau did not believe in the utility of conventional forces for the deterrence of nuclear weapons, even if NATO feared that by 1977, the alliance would no longer be able to deter the Soviet nuclear arsenal. This was evidenced between 1970 and 1976 where

⁴⁵ Institute for Strategic Studies, "The Military Balance," (1971), 16.

⁴⁶ Donald S. Macdonald, Canada. Department of National Defence, *White Paper on Defence*, (Ottawa: Information Canada, 1971), 27.

⁴⁷ J.L. Granatstein, and Robert Bothwell, *Pirouette: Pierre Trudeau and Canadian Foreign Policy*, (Toronto: University of Toronto Press, 1990), 252.

the Warsaw Pact had increased its surface warships (500 tons and larger) from 240 to 580 and maintained its submarine fleet at 400 while the North Atlantic Alliance had decreased its surface warships from 980 to 540 and its submarine fleet from 290 to 270 during the same period.⁴⁸

From this reasoning, it became evident that the money invested in the navy would be trivial and that the navy's role would amount to national's defence.

By 1975 the navy, and the air assets under Admiral Boyle's command, were in a state of such disarray that he suggested that our sovereignty be relinquished to the Americans.⁴⁹ His statement resulted from further cuts in the RCN since that by mid-1970, Canada had placed three destroyers in reserve, reduced Maritime Command's (MARCOM) budget by 10 per cent, and had paid off HMCS *Bonaventure* even if the ship, in 1967, had been refitted at a cost of \$11 million and was good for another decade of duty.⁵⁰ In losing *Bonaventure* from its fleet, the RCN was parting from the only sealift that remained in the navy.

When the round of cuts occurred in the mid-1970s, only the O-boats benefited from the additional money through the modernization of their weapon and fire control systems. There was still substantial investment required for the RCN as the fleet was near obsolescence. So, in 1977, the Liberals announced that the Canadian Patrol Frigates (CPF) would be built, but that delivery would take at least eight years before Canadian could see the fruit of the industry's labour. The announcement, although promising for the RCN, was far from addressing the obsolescence of the fleet and the requirement to modernize a few ships to at least narrow the capability-gap which existed. As such in 1978, the DELEX Project was announced. The project was designed to

⁴⁸ Department of National Defence, *Defence 1977*, (Québec: Supply and Services Canada, 1978), 3.

⁴⁹ Tony German, *The Sea Is at Our Gates: The History of the Canadian Navy*, (McClelland & Stewart: Toronto, 1990), 313.

⁵⁰ *Ibid*: Government of Canada, "HMCS *Bonaventure*," last modified 2 August 2017, <https://www.canada.ca/en/navy/services/history/ships-histories/bonaventure.html>.

extend the life by 15 years for 16 steam-driven destroyers pending their replacement by new ships.⁵¹ In essence, six ships from the St. Laurent Class, 4 ships from the Improved Restigouche Class, 4 ships from the Mackenzie Class, and 2 ships from the Annapolis Class were modernized with a combination of hull repairs, radars, sensors, new sonars, and navigation systems.

In 1971, the defence policy initiated the process of adjusting the balance between international developments and national interests starting with the surveillance and control of our own territory and coast-lines, thus the protection of Canada's sovereignty.⁵² It became evident in Trudeau's era that even if the fleets on both coasts were provided with meager resources and budgetary cuts, that the RCN would nevertheless be utilized at home, and would be provided with greater military and non-military purposes. As such came the heightened demands on the RCN for fisheries patrol, surveillance of the Arctic, and aid to non-military organizations for the purpose of pollution control.

In 1977, Canada's territorial sea extended three miles offshore, but to further conserve Canada's fishing resources on both coasts, the Liberal government enacted a legislation to extend Canada's territorial sea from three to twelve miles.⁵³ This legislation meant that the RCN would be committed to patrolling and policing an area of more than half the size of Canadian land mass, and that within existing budgets and forces constraints.⁵⁴ Ultimately, the excess responsibilities provided to the RCN not only gave the Liberal government a means to safeguard national interests, but as well a means to further increase the number of days and hours of ships spent on

⁵¹ GlobalSecurity.org, "St. Laurent / Restigouche / Mackenzie Destroyer Escorts (DDE)," last modified 11 July 2011, <https://www.globalsecurity.org/military/world/canada/hmcs-st-laurent.htm>.

⁵² Macdonald, Canada. Department of National Defence, *White Paper* . . . , 16.

⁵³ *Ibid*, 9.

⁵⁴ Department of National Defence, *Defence 1977* . . . , 13.

surveillance and inspection of fishing vessels.⁵⁵ With a fleet of only 20 destroyers, and while 4 were part of the training group fleet in Esquimalt, balancing the need for increased fisheries surveillance stretched the naval capability, most notably that commitments such as participation in NATO exercises, maintaining combat readiness with the US forces, and providing assistance to civil organizations had to be maintained at the same time. By keeping warships at sea for a longer period of time meant that maintenance suffered, rubbing as such the fleet's efficiency for future commitments.

As part of safeguarding Canada's national interests, the RCN was not only required to provide capabilities for fisheries patrol, but as well provide aid to non-military organizations for the purpose of pollution control. In the 70s, it was the first time that such aid was defined. No other previous defence policies had ever mentioned the requirement to use the Armed Forces in this context, and most notably in providing relief and assistance in the event of natural disasters. Part of Canada's national development was to employ the Forces as a major contributor in the preservation of unspoiled environment and to support civil agencies in exercising pollution control in the North and off Canada's coasts.⁵⁶ The navy was to carry surveillance and control over areas deemed unrestrained for oil tankers' navigation and to provide support should there be an oil spill within Canada's territorial sea. In order to protect the environment and to prevent land use and mineral exploration and exploitation close to Canadian's borders, the Liberal government enacted a law in 1971 providing for the exercise of pollution control jurisdiction in an area extending generally 100 miles from the mainland and islands of the Canadian Arctic.⁵⁷ The tanker *Arrow*, which went aground in Chedabucto Bay on 4 February 1970, provided

⁵⁵ *Ibid.*

⁵⁶ Macdonald, Canada. Department of National Defence, *White Paper* . . . , 13.

⁵⁷ *Ibid.*, 8.

justification for this law, although the devastation of the *Arrow*'s oil spillage spread significantly further more than the 100 miles limits. A recommendation was actually put forth to the Minister of Transport in 1970 to extend such limit since 190 miles of the shoreline in Chedabucto Bay had been contaminated by the *Arrow*'s cargo, although only 100 miles limits were established through legislation.⁵⁸

The *Arrow* oil spill provided the Liberal government, and by extension the Department of National Defence, with a springboard for enacting parts of the defence policy in the 70s since several recommendations provided to the Minister of Transport in September 1970, through the oil spill report, transpired in the defence policy. In an era where social and economic needs are considerable, and where there is substantial pressure to cut defence expenditures⁵⁹, providing the Forces with more responsibilities in the realm of assisting with disaster relief at home, among other requirements, enabled the government to reduce its strategic commitments with NATO and the UN, and to fulfill national aims through innovative policies.

HMCS *Cape Scott*, in concert with the Navy diving team, and other civil organizations such as the Ministry of Transport, provided a wide range of services and skills during the clean-up operations after the tanker *Arrow* went aground.⁶⁰ For instance, HMCS *Cape Scott* was used as a dormitory ship along with Coast Guard Vessel *Narwhal* during the operation.⁶¹ HMCS *Cape Scott*, then 25 years old, was due to be paid-off, although after the assistance and disaster relief operation, the oil spill report recommended that *Cape Scott* be retained due to its capability in providing various services such as accommodation, repair and maintenance, and storage facility

⁵⁸ Canada, Task Force – Operation Oil, *Report of the Task Force – Operation Oil (Cleanup of the Arrow Oil Spill in Chedabucto Bay) to the Minister of Transport, Volume One*, (Ottawa: Information Canada, 1970), 2.

⁵⁹ Macdonald, Canada. Department of National Defence, *White Paper . . .*, 1.

⁶⁰ *Ibid*, 13.

⁶¹ Canada, Task Force – Operation Oil, *Report of the Task Force . . .*, 33.

for essential items of a contingency packet.⁶² All in all, some recommendations from the oil spill report were retained, such as enacting a legislation for the protection of our coast-lines and employing the Forces for assistance and disaster relief, but *Cape Scott* was never maintained operationally after the disaster relief, and as such was paid-off shortly after the incident.

While the RCN provided direct support to the tanker *Arrow* during the incident in 1970, Trudeau's government also provided significant development aid to the South and that most notably in Africa, India and Latin America. Trudeau believed that the disparity between rich and poor should be diminished through collective effort. This was evidenced in his speech in May 1968 at University of Calgary when he mentioned that 'never before in history has the disparity between the rich and the poor, the comfortable and the starving, been so extreme, [and as such] the world must be our constituency.'⁶³ His approach, unlike his predecessor, was no longer to outpour direct aid to developing countries, but to develop with them a set of arrangements in the field of trade, investment, education, science and technology, so that these developing countries would someday be able to develop their own efforts at "self-help."⁶⁴

The development aid ran through CIDA, which was put in place in 1968. CIDA's mission [was] to support sustainable development in developing countries including areas such as economic, social, cultural and political sustainability.⁶⁵ Between 1968 and 1984, Canadian assistance increased from 0.28 to 0.49 percent of Canada's Gross National Product (GNP),

⁶² *Ibid.*

⁶³ Granatstein, and Robert Bothwell, *Pirouette: Pierre Trudeau . . .*, 265.

⁶⁴ *Ibid.*, 287.

⁶⁵ Canadian International Development Agency (CIDA), "CIDA's Policy for Environmental Sustainability," last accessed 24 March 2020, http://publications.gc.ca/collections/collection_2013/acdi-cida/E94-29-9-1-eng.pdf.

enabling development activities through CIDA.⁶⁶ CIDA helped countries such as Tanzania develop railways, waterworks, and hydroelectricity, while providing close to \$500 million to Bangladesh in the form of aid package, mostly food.⁶⁷ Latin America also received trade aid, which quadrupled in a period of 16 years. To illustrate, Canadian bought \$357 million worth of goods from Venezuela in 1968, to \$1.2 billion in 1984⁶⁸, helping Venezuela economy and employment. Although it was in Canadian interests to expand commerce and business in Latin America, it remained nonetheless that aid was provided as a means to develop countries such as Venezuela.

During Trudeau's tenure, economy came first and the navy suffered as a consequence. The CPFs, although announced in 1977, were just reaching definition phase, and most ships in the St. Laurent and Restigouche classes were approaching 30 years old. The Mackenzie class was going through the DELEX program and the Annapolis class, at almost 20 years old, was waiting to be modernized. As such, in the early 80s, Canada's modern war fighting capabilities amounted to four DDH 280 destroyers and three diesel submarines. The Defence budget was increased from \$4.389 billion in 1980 to \$7.97 billion in 1984⁶⁹, although decades of neglect required an enhanced plan to bring the navy from a life support state to a renewed vitality. *Challenge and Commitment, A Defence Policy for Canada* in 1987 was promising just that.

⁶⁶ Canadian International Development Agency (CIDA), "Statistical Report for International Development Assistance, Fiscal Year 2001–2002," last accessed 24 March 2020, http://publications.gc.ca/collections/collection_2011/acdi-cida/CD2-4-2002-eng.pdf.

⁶⁷ Granatstein, and Robert Bothwell, *Pirouette: Pierre Trudeau . . .*, 289-293.

⁶⁸ *Ibid*, 269.

⁶⁹ *Ibid*, 255.

1987 – Challenge and Commitment, A Defence Policy for Canada

The détente era of the 70s had brought with it a rust-out navy while the power of the Soviet fleet was becoming even more prominent in the Atlantic. All efforts were focused at home, in the defence of our sovereignty. The focus on capability-gap in June 1987 provided the navy with a springboard to renew itself, although with the world geopolitical developments from the end of the Cold War in 1989 and the fall of the USSR in 1991, changes in Canadian defence policy ensued.

Challenge and Commitment: A Defence Policy for Canada promulgated in 1987 was quite distinct from Trudeau’s White Paper in 1971. First, *Challenge and Commitment* focused extensively on rebuilding the obsolete fleet; a fleet in which nuclear submarines would be added, along with a second batch of CPFs, and minesweepers. *Challenge and Commitment*’s first security objective was to promote a stronger and more stable international environment⁷⁰ in which Canada was not only going to be a mere spectator, but an active member through capability investment. By 1987, the Soviet Union had expanded its strategic nuclear forces so significantly, that some Soviet capabilities outnumbered those of the US. For example, in 1987, USSR possessed 928 submarine-launched ballistic missiles (SLBMs) as compared to 640 for the US.⁷¹ Although the US possessed a significantly greater amount of warheads, the Soviet global reach capability of the navy had become the greatest threat to NATO, and by extension, to Canada. As such, as a means to reinforce Canada’s contribution to NATO, and to protect

⁷⁰ Perrin Beatty and Canada, Department of National Defence, *Challenge and Commitment: A Defence Policy for Canada: A Synopsis of the Defence White Paper*, (Ottawa: Minister of Supply and Services Canada, 1987), 3.

⁷¹ *Ibid*, 9.

Canada's interests, Canada would not only develop a naval capability to deter the enemy, but as well a powerful one to inflict damages should Canada be called into battle.

Second, *Challenge and Commitment* bolstered the protection of Canada's sovereignty not only through surveillance and control of coastal areas, but as well through the maintenance of strategic deterrence with allied partners. In 1985, Soviet submarines prowled the depth of the Arctic Ocean to travel into the Atlantic, making NATO's monitoring of such capabilities difficult. As a means to deter such activities, Canada not only had to bolster its capabilities for the security of its three oceans, but as well to strengthen its alliance with NATO, particularly with the US, which already possessed such deterrent.

Lastly, *Challenge and Commitment* broadened the RCN's commitment for disaster and humanitarian relief not only from a home front perspective through oil spill clean-up, but as well to a number of Third World countries to alleviate human suffering.⁷² Canada's decision to continue its commitments towards humanitarian relief, in partnership with the Department of External Affairs and the Canadian International Development Agency,⁷³ was essentially a derivative of Canada's first security policy objective, that of promoting a stronger international environment.⁷⁴ Mulroney understood that by continuing to provide assistance to those in needs overseas, Canada would not only strengthen its diplomatic relations, but as well protect Canada's national interests. When global problems arise, they usually become difficult and expensive to deal with after they have emerged and grown.⁷⁵ As such, by providing HA in the form of trade, investment, and military assets such as HMCS *Preserver* in 1992 in Somalia during *Operation*

⁷² *Ibid*, 86.

⁷³ *Ibid*.

⁷⁴ *Ibid*, 3.

⁷⁵ Michael Byers, *Intent for a Nation: What is Canada for?: A Relentlessly Optimistic Manifesto for Canada's Role in the World*, (Vancouver: Douglas & McIntyre, 2008), 123.

Deliverance, Canada contributed not only to international rest, but as well to the protection of a nation's interests.

In 1987, as the country was experiencing an economic downturn, it became difficult for the Conservative Party to meet all of its engagements for the replacement of run-down equipment in all branches of the Canadian Forces. In fact, by 1987, the list of demands which called for the replacement was so enormous that it clearly outpaced the government's intentions and its budget.⁷⁶ As such, the government was faced with three approaches: increase significantly the resources devoted to defence, reduce commitments, or seek some combination of these two alternatives.⁷⁷ As the Defence budget could not be increased at a rate commensurate to the obsolescence of the forces, the first approach was too aggressive to be implemented. The second approach, if carried out in its entirety, would require massive cuts in [Canada's] military commitments⁷⁸, meaning that this approach would be in direct contradiction with Canada's first security objective to promote a stronger and more stable international environment.⁷⁹ Therefore, discarding this approach was the logical thing to do. The third approach, which called for a mix of the two first alternatives, was the only viable choice the Conservative Party faced; and so with it, came the resurrection of the RCN within the new funding framework.

In 1963, Canada operated 45 major warships and 10 minesweepers, while in 1987 the fleet amounted to only 26 aged ships and no minesweepers.⁸⁰ Mulroney's announcement of a revitalized navy in the late-80s brought confidence among Admirals that the navy of tomorrow would see better days than the dark period it had just endured. To reinvigorate the fleet, the

⁷⁶ Bland, *Canada's National Defence* . . . , 187.

⁷⁷ Beatty and Canada, Department. of National Defence, *Challenge and Commitment* . . . , 47.

⁷⁸ *Ibid.*

⁷⁹ *Ibid*, 57.

⁸⁰ *Ibid*, 44.

acquisition of 10-12 nuclear submarines, the modernization of four DDH 280, the procurement of an extra six CPFs, and the addition of 12 Minor Coastal Defence Vessels was announced.

Although the principal threat to Canada was perceived as a nuclear attack by the Soviet Union⁸¹ in the late 80s, the announcement for the acquisition of nuclear submarines came as a surprise, most notably due to their significant costs and the fact that the appetite for such capability was nullified in previous White Papers. The significant increase in the Warsaw Pact capabilities in the 70s, as compared to the decrease in capability of the North Atlantic Alliance during the same period, presented a vision of instability for the world. Therefore, in order to respond to the Soviet threats along with NATO, Canada announced the acquisition of nuclear-powered submarines.⁸²

Aside from the announcement regarding the acquisition of nuclear-powered submarines, the release for the modernization of the DDH 280, announced in 1985, also provided the navy with an increased capability for future commitments. In the mid-80s, HMCS *Iroquois*, *Huron*, *Athabaskan*, and *Algonquin* were on average 13 years old. In order to continue to be effective beyond the 90s, a modernization program was imperative. As such, the Tribal Update and Modernization Program (TRUMP), launched in 1985 and completed in 1995, provided Canada

⁸¹ *Ibid*, 10.

⁸² The announcement of nuclear-powered submarines was also derived from a need to protect Canada's sovereignty, most notably the "under the ice part" of the Arctic. Canada believed that the acquisition of nuclear submarines was the perfect ingredient in the combination of assets that Canada needed to procure, and that not only for the protection of the Atlantic and Pacific oceans, but as well for the safeguard of the Arctic ocean where Soviet and American nuclear submarines were operating. As destroyers lacked the capability for surveillance in the Arctic during the winter months, the acquisition of nuclear-powered submarines, capable of operating under all conditions, seemed to be the crucial asset to invest in.

with a renewed capability, which provided, among other vital features, an area air defence for a Canadian task group at sea.⁸³

In addition to the phased approach acquisition of nuclear submarines and the modernization of the DDH 280, the announcement of the procurement of six CPFs beyond the 6 which were already approved, was another key component the navy required to bolster its fleet on both coasts. The CPFs demanded a considerable amount of time to design and build though, which came as an impediment in closing the capability gap which existed in the 80s and the early 90s. In fact, the slipping of the CPF project was such that the current aging fleet was required to absorb more responsibilities than it was capable of. In the end, by the time the CPFs were all delivered in 1996, 11 destroyers had been paid off, and soon after five would follow suit. All the destroyers which had been paid off had lasted less than the 15 years expected by the DELEX modernization program. In fact, the average useful life the DELEX program had provided these ships with was a mere 10 years. Therefore, while the Conservative Party hoped to reinvigorate the fleet in the late 80s and the early 90s, the reality portrayed a different picture. The five years that 11 destroyers could have provided, but were incapable of due to their early retirement, enabled the capability gap to continue.

The announcement for the acquisition of minesweepers in 1986 provided the navy with another reason to celebrate. In 1987, the Mulroney government was wary about Canada's inability to keep Canadian waterways and harbours clear of mines.⁸⁴ The government's perception was that Canada's ports and internal waters were vulnerable to closure or disruption

⁸³ Canadian Tribal Association – Iroquois II, “HMCS *Iroquois* DDH 280,” last modified 20 September 2007, <http://jproc.ca/cta/iroq2.html>.

⁸⁴ Beatty and Canada, Department. of National Defence, *Challenge and Commitment . . .*, 43.

in war by mines laid by enemies.⁸⁵ The procurement of Minor Coastal Defence Vessels (MCDVs) became the asset of choice to rectify this problem, most notably since the existing fleet of minesweepers was reduced to a training role. By the late 80s, six Bay-class minesweepers, nearing 30 years old, served as training platforms on the West Coast.⁸⁶ As the first MCDV was to be commissioned in 1996, the government realized in 1987 that a major capability gap still existed on both coasts. The *Anticosti*-class minesweeper came to the rescue as an interim solution. In 1988, the Mulroney's government acquired two oil rig support vessels, *Jean Tide* and *Joyce Tide*, and started their conversion into minesweepers capability.⁸⁷ HMCS *Anticosti* (formerly *Jean Tide*) and HMCS *Moresby* (formerly *Joyce Tide*) served on both coasts until they were paid off in March 2000.⁸⁸ Prior to her retirement, HMCS *Anticosti* played a vital role during *Operation Persistence*, a HA operation which provided assistance to national authority in 1998 after Swissair Flight 111 plunged into St. Margaret's Bay. This HA operation will be discussed later in the paper.

Between 1985 and 1990, the Conservative Party followed suit in its commitments towards humanitarian relief, in partnership with CIDA. Similar to the Trudeau's government, the Conservative Party maintained its development assistance close to 0.5 percent of its GNP, although a greater emphasis was provided to African countries during this period. In 1984, *The National* aired a four-minutes editorial on the devastating famine in Ethiopia, which brought

⁸⁵ *Ibid.*, 51.

⁸⁶ German, *The Sea Is at Our Gates* . . . , 308.

⁸⁷ RCN News. Canadian Navy of Yesterday, Today and Tomorrow, "Ex-HMCS *Anticosti* in the News," last modified 20 May 2013, <https://web.archive.org/web/20160509070909/http://rcnnewsmagazine.blogspot.ca/2013/05/ex-hmcs-anticosti-in-news.html>.

⁸⁸ *Ibid.*

international action for Canadians from coast to coast.⁸⁹ In a period of 10 years, between 1980 and 1990, Canada's aid budget provided to Africa increased by \$633,790,000 as depicted in Table 2.2. Asia continued to be an important recipient of Canada's aid during this period, although Africa attracted considerable international attention, in part because of famine and the struggle against apartheid.⁹⁰

Table 2.2 – Percentage Distribution of Government-to-Government Official Development Assistance by Region, Ten-Year Cumulative Totals, 1950-60, and Five-Year Cumulative Totals, 1960-95

Period	Asia	Africa	Americas	Miscellaneous	Total
1950-51/ 1959-60	99.9 (288.66)	- (0.11)	0.1 (0.29)	-	100.0 (289.04)
1960-61/ 1964-65	88.4 (192.27)	6.4 (14.00)	5.2 (11.30)	-	100.0 (217.57)
1965-66/ 1969-70	76.1 (556.95)	16.9 (123.87)	6.6 (48.60)	0.4 (2.70)	100.0 (732.12)
1970-71/ 1974-75	54.7 (937.25)	35.1 (601.01)	8.6 (146.82)	1.6 (28.94)	100.0 (1,714.02)
1975-76/ 1979-80	45.1 (1,193.17)	41.4 (1,094.86)	11.9 (315.21)	1.6 (44.39)	100.0 (2,647.63)
1980-81/ 1984-85	41.1 (1,408.62)	47.2 (1,616.98)	8.2 (280.72)	3.5 (117.92)	100.0 (3,424.24)
1985-86/ 1989-90	38.6 (1,935.77)	44.8 (2,250.77)	15.4 (775.37)	1.2 (59.97)	100.0 (5,021.88)
1990-91/ 1994-95	34.5 (1,637.55)	47.4 (2,250.92)	17.8 (846.15)	0.3 (13.06)	100.0 (4,747.68)
All years	43.4 (8,150.24)	42.3 (7,952.52)	12.9 (2,424.46)	1.4 (266.98)	100.0 (18,794.2)

Source: David R. Morrison, "Aid and Ebb Tide: A History of CIDA and Canadian Development Assistance", 455. Figures in parentheses are \$ million.

⁸⁹ Greg Donaghy, and David Webster, *A Samaritan State Revisited: Historical Perspectives on Canadian Foreign Aid*, Vol. no. 10; no. 10, (Calgary, Alberta: University of Calgary Press, 2019): 245.

⁹⁰ Rohinton Medhora, and Yiagadeesen Samy, *Canada-Africa Relations: Looking Back, Looking Ahead*, (Waterloo Ontario: CIGI, 2016): 182, <http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=1409644&site=ehost-live&scope=site>.

All in all, *Challenge and Commitment: A Defence Policy for Canada* promulgated in 1987 provided the narrative required for a new fleet including the purchase of nuclear submarines, the procurement of six CPFs and 12 minesweepers, and the modernization of 4 DDH 280, although with the new geostrategic conditions resulting from the end of the Cold War, Canada's direction had to change drastically. The *Canadian Defence Policy* enacted in April 1992 refers and is discussed in the next section.

1992 – Canadian Defence Policy

By 1992, with the end of the Cold War and the disbandment of the Soviet Union, *Challenge and Commitment: A Defence Policy for Canada* had become irrelevant. The reduced conventional threat to NATO meant that considerable efforts would be redirected to the defence of Canada's sovereignty, and that participation with NATO would become consistent with Canada's interests and capabilities.⁹¹ The world, as most nations had known it, had ceased to exist. As Robert Hartfield indicates, "the fixation of NATO defence planners on the Soviet Union during [the Cold War] period [was defined] as "point-scenario planning" [where] a "fixation on particular enemies, particular wars, and particular assumptions about those wars [were all] Western militaries were tailored [to plan for]."⁹² With the new geostrategic conditions, most NATO countries had to adapt to the new reality, including Canada.

Canada's direction changed drastically with the end of the Cold War. The new priorities amounted to the defence, sovereignty and civil responsibilities in Canada, collective defence arrangements through NATO and with the US, and international peace and security through

⁹¹ Department of National Defence and Canada, Ministère de la défense nationale. *Canadian Defence Policy*, (Ottawa: Department of National Defence, 1992), 9.

⁹² Robert Michael Hartfiel, "Planning without Guidance: Canadian Defence Policy and Planning, 1993–2004," *Canadian Public Administration* 53, no. 3 (2010): 327.

stability and peacekeeping operations and [HA].⁹³ The new priorities meant that the RCN would find a greater role in Canada through maritime patrol on both coasts, particularly with respect to fisheries, drug interdiction, search and rescue, disaster relief, and environmental monitoring; that maritime assets provided to NATO would be scaled back; that the US would continue to be our greatest allies; and that Canada would provide [HA] should the scale of human suffering [was] such that local and international civilian resources [could not] cope.⁹⁴ All in all, the 1992 Defence Policy was an indication that the Mulroney's government had made promises to reinvest in defence, but that the Conservative Party could not uphold. There was no money in the bank. As such, the Conservative government had no choice, but to curtail its defence expenditures.

In order to procure funds for capital and to reduce Canada's post-Cold War deficit, a new fiscal framework was established. As such, under the new structure, the Canadian Forces personnel, infrastructure, training, operations, and procurement initiatives were either reduced or abated completely. The cancellation of the nuclear-powered submarines acquisition was a prime example. Under the new policy, no longer did Canada express its coastlines as three oceans, but as the East and West coasts, leaving the latitude to other countries' navies to operate all year in the Arctic.⁹⁵ With the appearance of a reduced threat to Canada from Soviet submarines, and from a visible economic downturn in Canada, the Mulroney's government thought prudent to leave the surveillance of the North to a reduced aperture, at the least possible cost, with the hope that the US would contribute should a crisis arise. As the 1992 *Canadian Defence Policy* states, “[with] the limited resources that we can devote to defence mean that, for the foreseeable future,

⁹³ Department of National Defence . . . *Canadian Defence Policy* . . . , 11.

⁹⁴ *Ibid*, 3-35.

⁹⁵ Jane's Defence Weekly, “Country Survey: Canada,” last modified 3 October 1992, <https://janes.ihs.com/Janes/Display/jdw02061-jdw-1992>.

Canada will maintain its long-standing relationship with the US.”⁹⁶ The announcement and the cancelling of the nuclear-powered submarines was truly a reflection of miscalculation, and that the steady, predictable and honest funding program announced in 1987 was no longer possible due to constraints by fiscal realities.⁹⁷

In the early 90s, Canada was not the only country to scale back, and as Robert Hartfield indicates, “[g]overnments in NATO member countries responded to the economic downturn . . . and public expectations for a “peace dividend” by slashing defence budgets.”⁹⁸ The United Kingdom (UK) Royal Navy was also affected by the new geostrategic environment. With the end of the Cold War, the Royal Navy faced large-scale reductions in the size of [its] surface and submarine fleets, which meant that not only the UK’s aging fleet would go further into abeyance, but that the shipbuilding industry would suffer as a consequence.⁹⁹ After the dissolution of the Soviet Union, it became apparent in most countries that social programs would be provided with more resources and that national debt repayment would be at the core of new defence policy. For Canada in 1992, it became evident that in the future only two things would be constant in defence: “international change and fiscal restraint”.¹⁰⁰

From the policy in 1992, the RCN was provided with clear objectives: the provision of surveillance and control on both coasts, the participation with NATO in crisis or war – as displayed during the Gulf War – and the procurement of HA at home and abroad should the suffering of people exceed the civilian organizations’ capability. The deployment of HMCS

⁹⁶ Department of National Defence . . . *Canadian Defence Policy* . . . , 6.

⁹⁷ Beatty and Canada, Department. of National Defence, *Challenge and Commitment* . . . , 47.

⁹⁸ Hartfiel, "Planning without Guidance . . . , 327.

⁹⁹ Jane’s International Defense Review, “UK Naval Shipbuilding Slow Boat to Contraction,” last modified 1 December 1992, <https://janes.ihs.com/Janes/Display/idr01336-idr-1992>.

¹⁰⁰ Jane’s Defence Weekly, “Country Survey: Canada.

Preserver in Somalia in 1992 as part of *Operation Deliverance* and the deployment of HMCS *Protecteur* in the Caribbean and Florida, also in 1992, as part of *Operation Tempest*, clearly delineated the international changes for the RCN.

On 4 September 1992, HMCS *Preserver* was issued a warning order to “be prepared to sail in 12 days to support the Army off East Africa”.¹⁰¹ The Somalia mission had for mandate to prepare members of the CAF for ‘Operation Cordon’; a peacekeeping mission led by the UN. As the UN quickly ran into difficulties because of the non-traditional peacekeeping situation in Somalia, the US proposed a Unified Task Force Somalia (UNITAF) with a mission name of ‘*Operation [Deliverance]*’, led by the US and not the UN.¹⁰² HMCS *Preserver* set sail on 16 November, two months after the warning order had been promulgated since the UN, prior to this date, was still debating the composition of the force. HMCS *Preserver* arrived off the coast of Somalia on 5 December carrying land force’s defensive and accommodation stores, field rations, ammunition, water, vehicle spare parts, and medical supplies.¹⁰³ Although HMCS *Preserver*’s primary mission was to sustain an advance party of 500 Canadian infantry troops that would be sent to Somalia,¹⁰⁴ her mandate changed after the US took control of the mission under UNITAF. HMCS *Preserver*’s mission was no longer a pure military assistance mission, but as well one where HA would be provided in the form of support to non-governmental organizations (NGOs) and other vessels, making *Preserver* a force enabler for other navies. During her time in theater, the crew of *Preserver* became heavily involved in providing humanitarian relief in Somalia

¹⁰¹ Laura J. Higgins, and Dalhousie University, Centre for Foreign Policy Studies, *Canadian Naval Operations in the 1990s: Selected Case Studies*. Vol. no. 12, (Halifax, N.S: Centre for Foreign Policy Studies, Dalhousie University, 2002): 51.

¹⁰² Janis L. Goldie, *Morals, Process and Political Scandals: The Discursive Role of the Commission in the Somalia Affair in Canada*. (Calgary, AB: University of Calgary, 2009): 55-57.

¹⁰³ Higgins, and Dalhousie University, Centre . . . , 51-53.

¹⁰⁴ *Ibid*, 51.

through medical assistance and supplies, repairs for electric generators and air conditioning units, and mobile repair unit for the NGOs in the region.¹⁰⁵ In accomplishing her task, *Preserver*, in which an air crew was present to operate the *Sea Kings* during various evolutions, contributed not only to the main objective of distributing supplies for the land forces, but as well contributed to the overall humanitarian aid effort. Moreover, her presence enhanced Canada's foreign policy through diplomatic support to the navies in the region and in support of the UN.

In a similar vein, HMCS *Protecteur* deployed on *Operation Tempest* from 10 September to 26 October 1992 to assist in the rebuilding efforts in the Bahamas and Florida after Hurricane Andrew left considerable damages in both countries.¹⁰⁶ After Hurricane Andrew became a Category 4 storm, gusting at 300km/h in the Bahamas, destroying 470 homes and leaving 1,700 people homeless, it moved south to Florida, leaving an additional 250,000 people homeless.¹⁰⁷ The two regions were in dire need of humanitarian aid, and therefore on 7 September, Prime Minister Brian Mulroney announced that HMCS *Protecteur* would be deployed, carrying on board the supplies required for the airfield engineers to rebuild two severely damaged schools in Goulds, Florida.¹⁰⁸ While in Florida, *Protecteur's* crew joined the engineers in rebuilding the schools, and provided support services to the American Red Cross relief centre.¹⁰⁹ Upon the completion of the building efforts in Florida, *Protecteur* proceeded to the Bahamas where her

¹⁰⁵ *Ibid*, 55.

¹⁰⁶ Government of Canada, "Operation Tempest," last modified 12 December 2018, <https://www.canada.ca/en/department-national-defence/services/military-history/history-heritage/past-operations/north-america/tempest.html>.

¹⁰⁷ *Ibid*.

¹⁰⁸ Joseph Scanlon, "Help from the Deep: The Potential of Ocean-Based Response to Disaster." *Disaster Prevention and Management* 5, no. 3 (1996): 16-23. doi:<http://dx.doi.org/10.1108/09653569610121204>. <https://search.proquest.com/docview/214376374?accountid=9867>.

¹⁰⁹ Government of Canada, Operation Tempest.

crew provided relief, as depicted in Figure 2.2, to the towns of Bogue and Current by building or repairing 37 homes, including a church and a school.¹¹⁰

The Auxiliary Oiler Replenishment (AORs) ships *Preserver* and *Protecteur* were commissioned in 1970 and 1969 respectively to provide the ships at sea with fuel, lubricants, water, provisions, stores and ammunitions for other ships in the Canadian Task Groups.¹¹¹ These ships, although tasked to provide logistics and troops ashore, as displayed in Somalia, the Bahamas, and Florida, had a primary purpose, when built, to replenish naval warships at sea. These AORs were not meant to provide a strategic sealift capability when they were designed



**Figure 2.2 – Relief Efforts at Eluthra, Bahamas, by
HMCS *Protecteur* and CFB Halifax Personnel**

Source: Canada. Government of Canada, Operation Tempest.

¹¹⁰ *Ibid.*

¹¹¹ Burton, and Paul L. Massel, “Afloat Logistics and Sealift Capability . . .”, 1.

since after World War II, platforms were designed to maintain the greater amount of ships at sea as a deterrence for the Soviet submarines. Although *Preserver* and *Protecteur* provided human resources and logistics support to alleviate the human suffering in the regions aforementioned, using these vessels as amphibious ships displayed their limitations as these AORs lacked the capacity to transport vehicles and heavy equipment to theater. Furthermore, once in theater, they lacked the proper ship's design to facilitate loading and unloading of equipment through roll-on/roll-off ramps, and to transfer the equipment between land and the ship standing offshore using landing craft or powered rafts.¹¹² This deficiency, most notably in Somalia, placed significant pressure on the aging *Sea Kings*, as the operation would have been impossible without the presence of the three *Sea King* helicopters.¹¹³

An AOR, when deployed to theatre to assist in humanitarian relief effort, is a noble display of Canada's determination to help those who are suffering after a crisis has struck as shown in Somalia, the Bahamas, and Florida, although when such asset is deployed, much more is at stake than what meets the eye. First, the unavailability of an AOR for deployment as part of a Task Force reduces the replenishment capacity of the fleet at sea, forcing the fleet to seek replenishment from other navies or during port visits, which can add time to their missions and costs as port visits are expensive. Second, providing an AOR for HA provides an opportunity loss in training since that while an AOR is deployed for such humanitarian operation, the training capability for fuelling at sea from both the AOR and other RCN ships' perspectives is reduced. Therefore, while there is a significant propensity to rapidly deploy an AOR for HA to help those

¹¹² Ray Szeto, Barry Cooper, and Fraser Institute, *The Need for Canadian Strategic Lift*, Vol. no. 5. (Vancouver: Fraser Institute, 2005), 11.

¹¹³ Higgins, and Dalhousie University, Centre . . . , 54. This information is derived from the author's personal interview with Captain (N) Robin Allen (Retired), Commanding Officer of *Preserver* during *Operation Deliverance*.

in needs, this asset may not be the most judicious asset to send to theatre. As such, the procurement of an adequate capability for these types of operations is the judicious choice to make.

All in all, in the early 1990s, Canada's defence policy changed drastically and some measures set out in the 1987 *White Paper* had to be cancelled as a result of the end of the Cold War, the uniting of East and West Germany, and the dissolution of the Soviet Union. Among the drastic measures, defence expenditures had to be curtailed as a means for the Department to continue its efforts for Capital acquisitions, most notably for the second phase of the frigate replacement program and the modernization of the Tribal Class Destroyers.¹¹⁴ During the transition from *Challenge and Commitment: A Defence Policy for Canada* to the 1992 *Defence Policy*, the navy adapted to her new priorities of increasing her involvement through maritime patrol on both coasts, and providing assets to NATO and the UN as a means to alleviate human suffering, as depicted during *Operation Deliverance* and *Operation Tempest*. At the end of the Mulroney era in 1993, it became evident that further defence spending would be curtailed in the near future under Prime Minister Jean Chrétien, but that the provision of HA would remain. The next section refers.

1994 – Defence White Paper

The 1994 *Defence White Paper* clearly delineated the additional fiscal restraints required to attend to the progressive debt repayment in Canada since that as of 1994, the federal and provincial debt had accumulated to \$750 billion.¹¹⁵ This onerous debt indicated to the Liberal

¹¹⁴ Canada, *Estimates 1991-1992: Part III*, (Ottawa: Minister of Supply and Services, 1991), 26.

¹¹⁵ David Collenette, Canada. Department of National Defence, and Canada, Ministère de la défense nationale. *1994 Defence White Paper*, (Ottawa: Department of National Defence, 1994): 9.

government that further budget reductions would be necessary, and that not only at the defence level, but as well in most areas of spending. As David Collenette, Minister of National Defence, indicated in 1994:

The Department and the Canadian Forces have absorbed past reductions in a variety of ways. Canadian defence commitments have been revised, personnel levels cut back, operations and maintenance budgets shrunk, defence infrastructure reduced, and capital programs cancelled or delayed. As a consequence of the further decline in defence expenditure that forms context of this paper, cuts will be deeper, and there will be more reductions, cancellations, and delays. In some areas, the Department of National Defence and the Canadian Forces will do less.¹¹⁶

When the Liberal government indicated that the CAF would be called to do less, it was reasonably an indication that the CAF would continue to do “more with less”, as it was the case for the RCN from the mid-1960 to mid-1980s. On 5 December 1964, when the Liberal government announced that 24 ships, including the mobile repair ship *Cape Breton*, would be paid off, it was not an indication that the RCN would do less, but more with less since this meant that the resulting warships would have to respond to more commitments with less platforms available to attend to the naval commitments of Canada, NATO, and the UN. Similarly, when the Liberal government, under Trudeau, announced that 3 destroyers would be put in reserve, that HMCS *Bonaventure* would be disposed of, that MARCOM’s budget would be reduced by 10 per cent, and that participation in some NATO exercises would be cancelled, this did not mean that the RCN would be doing less, but more with less. To illustrate, in 1971, while the navy possessed only nine helicopter-destroyers and 11 destroyer escorts to man both coasts, the RCN participated in 7 moderate to long exercises throughout the year, including the

¹¹⁶ *Ibid*, 10.

transportation of His Excellency the Governor-General from England in HMCS *Preserver*, escorted by 3 destroyers.¹¹⁷ Needless to say, the RCN, with a total of 20 destroyers, was stretched to perform all the assigned tasks.

From the mid-1990s to early 1998, it was the air force, personnel, infrastructures, and operations and maintenance which were the most affected by the cuts. The Liberal needed to have the deficit under control, and as such the government either cancel expenditures or reduced them to a level commensurate with the debt repayment goal. In 1994, the *Sea King* helicopters, which were in dire need of replacement, were cancelled. The *Sea Kings*, at 31 years of age, were becoming obsolete and parts were becoming finite. They were also expensive to operate since each aircraft required 25.2 hours of maintenance for every hour it was flown.¹¹⁸ Maritime helicopters were vital for maritime operations and provided the airlift capability in the absence of the sealift feature in ships for HA as depicted in Somalia in 1992. When the Liberal government cancelled the procurement of the EH 101 helicopters as a replacement for the *Sea Kings*, and that at a cost of \$587,985,000,¹¹⁹ to only resuscitate the acquisition process for the *Sea Kings* a year later on the premise that *Sea Kings* were “rapidly approaching the end of their operational life,”¹²⁰ it became clear that although in 1993 the cancellation of the *Sea Kings* replacement became a contention issue for the election, that their obsolescence was observed and that the *Sea King* helicopters were in dire need of replacement. In 2015, six out of 28 CH-148 Cyclone were

¹¹⁷ Department of National Defence, *Defence 1971*, (Québec: Supply and Services Canada, 1972), 38-40.

¹¹⁸ Sharon Hobson, "Evergreen Sea King." *Canadian Defence Quarterly* 27, no. 3 (Spring, 1998): 32. <https://search.proquest.com/docview/197161149?accountid=9867>.

¹¹⁹ Canada, *Estimates 1994-1995: Part III*, (Ottawa: Minister of Supply and Services, 1994): 160.

¹²⁰ Collette, Canada. Department of National Defence . . . , 46.

delivered in Shearwater, Nova Scotia as part of the CH-148 Maritime Helicopter Program (MHP),¹²¹ some 52 years after the *Sea Kings* were introduced in the RCAF.

As a means to attend to the national debt repayment, Chrétien also reduced the Canadian defence personnel – military and civilian – during his tenure. In 1989, the regular force, the primary reserve, and the civilian stood at 88,800, 26,100, and 36,600 respectively as compared to 60,000 regular force, 23,000 primary reserve and 20,000 civilians in 1999.¹²² These reductions in personnel had produced the largest-ever downsizing in Canada in decades.¹²³ Most notably, these reductions were the products of the Civilian Reduction Program (CRP), the Force Reduction Plan (FRP) announced in 1990-91, and the closure of some two dozen bases and facilities across the country since 1994.¹²⁴ Although these reductions in personnel brought about funds for debt repayment between 1994 and 1999, they resulted nonetheless in a reduction of capability in the navy since that during *Operation Apollo*, from 2001 to 2003, only 48 per cent of military personnel remained on the coast to man the remaining warships, which in turn, left finite resources for further naval commitments.

During the Chrétien era, the operational tempo for the navy – that is the ratio of time spent in deployed missions¹²⁵ – had become quite substantial, albeit the decrease in defence budget. By the early 2000s, the fleet consisted of twelve brand new CPFs, 12 MCDVs, 3 modernized Iroquois-class destroyers, 2 AORs, and 3 Oberon Class submarines. With her new and modernized warships, Canada was ready to project its military and diplomatic power

¹²¹ "Press Release: Sikorsky Delivers Six CH-148 Cyclone Helicopters to Canada," *Dow Jones Institutional News*, Jun 19, 2015, <https://search.proquest.com/docview/2065249276?accountid=9867>.

¹²² Collenette, Canada. Department of National Defence . . . , 46.

¹²³ Canada, *Estimates 1999-2000: Part III*, (Ottawa: Minister of Supply and Services, 1999): 7.

¹²⁴ *Ibid.*

¹²⁵ *Ibid.*, 9.

globally. Therefore, between 1994 and 2003, the navy got significantly engaged in protecting maritime sovereignty and maritime jurisdictional interests, defending the maritime approaches to Canada, contributing to the collective defence of North America in conjunction with the US forces, supplying combat ready maritime forces to NATO, assisting other government departments and agencies in enforcing Canadian maritime laws and regulations, and supporting Canadian interests abroad, including forces for contingency operations, peacekeeping and HA operations.¹²⁶ As such, as part of supporting Canadian interests, HMCS *Anticosti*, along with other RCN ships and one submarine, deployed on 2 September 1998, to St. Margaret's Bay as part of *Operation Persistence*, and HMCS *Protecteur* deployed to East Timor on 15 September 1999 as part of *Operation Toucan*.

On 2 September 1998, at around 20:17, Swissair Flight 111 departed Kennedy International Airport for Geneva. Shortly after taking-off, the pilots noticed that there was smoke in the cabin, and as such decided to veer towards Halifax International Airport (HIA) to investigate the cause of the problem. Although, since the plane was too heavy to land with the amount of fuel on board, the pilot decided to change course towards St. Margaret's Bay to dump some fuel prior to converging again towards the HIA to land, but Flight 111 did not have that opportunity and crashed into the ocean, killing all 229 men, women and children onboard.¹²⁷ A few RCN ships were immediately deployed to provide HA while other ships were sent the next day, since it was confirmed that no one had survived the crash. HMCS *Anticosti*, one of the RCN deployed ships, became a vital asset during *Operation Persistence* where she scoured the sea, with other sister ships, looking for the Swissair Flight 111 black box after it plunged into St.

¹²⁶ Canada, *Estimates 1994-1995: Part III* . . . , 40.

¹²⁷ Virginia Beaton, "Ceremonies Mark a Decade Since Swissair Flight 111 Crash," *Trident*, 8 September 2008.

Margaret's Bay.¹²⁸ The submarine HMCS *Okanagan* was also critical in finding the location of the plane crash and debris. HMCS *Preserver* established the first on-site morgue on site, while HMCS *Ville de Québec, Kingston, Moncton, Goose Bay, and Glace Bay* shared the picking up of body parts and wreckages.¹²⁹ Although this event was an isolated and unfortunate case in Canada, the 1998 Swissair crash in Nova Scotia provided Canadians with the expertise needed to help relatives of those killed in the terrorist assaults on the World Trade Center on 11 September 2001, since Canadians had developed the lessons learned required from the Swissair tragedy to get the right information to families and to work with them.¹³⁰ HMCS *Anticosti*, an *Anticosti*-class minesweeper, was paid off in March 2000 as a result of the delivery of the twelve MCDVs in the 1990s.

In 1999, the RCN was also called to provide HA in East Timor. In 1976, after the Indonesian launched a coup to incorporate East Timor from the Portuguese, unrest in East Timor ensued. In 1999, after Indonesian President B.J. Habibie announced he would support a referendum for the independence of East Timor, Resolution 1246 was created, permitting the UN Mission in East Timor (UNAMET) to supervise the referendum.¹³¹ Following the announcement on 4 September that 78.5 per cent of the voters in the province had chosen independence, the militias, who were against the independence of East Timor, started committing acts of terror in

¹²⁸ *Ibid.*

¹²⁹ Debates of the Senate, *Official Report (Hansard)*, 1st session, 36th Parliament, Vol 137, no. 77, (Ottawa: Public Works and Government Services Canada, 1998), 1903; Sub-Lieutenant T.M. Wiggins, "Minor War Vessel Involvement with Operation Persistence," *Maritime Affairs*, (Fall 1998): 5.

¹³⁰ Anne Silversides, "Lessons Canada Learned in Swissair Crash Being Applied in New York: CMAJ CMAJ." *Canadian Medical Association Journal* 165, no. 9 (Oct 30, 2001): 1243, <https://search.proquest.com/docview/204808673?accountid=9867>.

¹³¹ Government of Canada, "International Force in East Timor (INTERFET)," last modified 11 December 2018, <https://www.canada.ca/en/department-national-defence/services/military-history/history-heritage/past-operations/asia-pacific/toucan.html>.

the eastern region through reducing infrastructure to ruins, harassing and murdering people.¹³²

As a consequence, the UN Security Council enacted Resolution 1264 on 15 September, creating the International Force for East Timor (INTERFET), under which three roles were established: restore peace and security in East Timor, protect and support UNAMET in carrying out its tasks, and facilitate HA operations within force capabilities.¹³³ As such, in mid-September, Prime Minister Jean Chrétien committed forces to INTERFET, which included HMCS *Protecteur*.

HMCS *Protecteur* arrived off the coast of Dili in East Timor on 23 October 1999 with the mission to provide a medical team ashore, humanitarian aid, and to serve as a floating command post for the Canadian Joint Task Force Commander (JTFC).¹³⁴ However, once *Protecteur* arrived in theatre, the mission had changed, at least at the onset of the mission, since INTERFET needed a ship at sea to refuel other navies as HMAS *Success* and *Endeavour*, two Royal Australian Navy (RAN) oiler replenishment ships, were in need of a maintenance period.¹³⁵ *Protecteur* soon became the naval component's only tanker and thus a potential single point of failure for the entire operation.¹³⁶ During her time at sea, and while supporting other navies, *Protecteur* also became the supporting element of the land operation as an Army component was also part of the peace enforcement operation. Altogether, *Protecteur* provided a total of 13 million litres of fuel to INTERFET and over 1 million kilograms (1,385 pallets) of stores in support of the mission.¹³⁷ Once the situation was stabilized in East Timor, reconstruction started and as such, the crew of

¹³² David Dickens, "The United Nations in East Timor: Intervention at the Military Operational Level," *Contemporary Southeast Asia* 23, no. 2 (08, 2001): 216, doi:<http://dx.doi.org/10.1355/CS23-2B>. <https://search.proquest.com/docview/205216586?accountid=9867>.

¹³³ Government of Canada, International Force in East Timor.

¹³⁴ Higgins, and Dalhousie University, Centre . . . , 59.

¹³⁵ David Stevens, *Sea Power Centre - Australia, Strength Through Diversity: The Combined Naval Role in Operation Stabilise*, (Canberra, Australia: Sea Power Centre – Australia, 2007): 33.

¹³⁶ Captain (N) R. Girouard, "Op Toucan", *Maritime Affairs*, (Fall 2000): 28; Stevens, *Sea Power Centre – Australia* . . . , 33.

¹³⁷ Higgins, and Dalhousie University, Centre . . . , 60.

Protecteur started providing a hand in the reconstruction efforts. *Protecteur*'s crew cleaned up debris in Dili's city centre, repaired the sewage and fresh water systems in the city, rebuilt generators, constructed shelters for returning refugees, and rebuilt a police school in Dili and a school in Suai.¹³⁸ As in Somalia, the *Sea King* helicopters provided a significant contribution to the operation in East Timor, bringing personnel and supplies from ship to shore as *Protecteur* lacked the sealift and Ro-Ro capabilities to complete these tasks. Captain (N) Girouard, who was the CJTF of *Operation Toucan* amplifies:

Heavy lift helicopters and littoral sea lift sum up the [two] areas where I believe we were most vulnerable as an international force. [What is required is a] carrying sea-going platform that can get gear and personnel into a port or across a beach. The beach aspect is vital . . . simply cater to Ro-Ro capabilities . . . which HMAS *Tobruk* and FNS *Siroco* (specialized amphibious platforms) catered to with a great degree of stress-relieved success. While *Protecteur* did a marvellous job, I wonder how we might have had more control over our own national movements and sustainment, been able to achieve as a force from a coalition perspective, and the kind of impression Canada might have been able to make as a nation, had the Afloat Logistics and Sealift Capability vessel (ALSC) been available.¹³⁹

Stevens echoed similar observations of the vital features of amphibious vessels when he states “throughout these three operations [*Operation Lavarack*, *Operation Strand*, and *Operation Respite*] Coalition maritime capabilities and, above all, amphibious units proved essential to any realistic efforts to make land forces mobile. ‘Military Sealift/Amphibious lodgments’ were ‘definitely an Allied affair: *Tobruk* transported cargo and troops from Australia, New Zealand,

¹³⁸ *Ibid.*

¹³⁹ Captain (N) R. Girouard, “Op Toucan”, *Maritime Affairs*, (Fall 2000): 28.

Canada and Ireland, while being escorted by or working in concert with Australian, Canadian, French, New Zealand, United Kingdom and United States warships and aircraft.”¹⁴⁰

During her deployment, *Protecteur* enabled the allied fleet in remaining on patrol for extended periods of time and provided HA through her *Sea Kings* and crew. Although, while providing HA, the RCN fleet dependency on this capability was moot since the sole West coast AOR was tasked in another theatre of operation. RCN ships not only require replenishment at sea at times, but as well food when a port visit is impossible to reach, or spare parts when a sister ship is in requirement of a part not available on her ship. An AOR has a great capacity for storage, therefore the fleet depends on this asset to remain on station for an extended period of time for replenishment at sea when required. It is not necessarily a platform adapted for HA though as the AORs introduced in 1969 and 1970 were meant to support the fleet at sea. An asset commensurate for the delivery of HA is what Canada requires.

In 1997, this lack of capability was observed when the key initiatives for the maritime forces were put forward. One of the initiative was to find a replacement for the AORs, and to “redress the Canadian Forces’ very limited capacity to provide logistic support, including sealift [in HA and joint operations].”¹⁴¹ This was further amplified in the 1998-99 Report on Plans and Priorities when the ALSC was announced as the capability of choice as a replacement of the AORs. As stated in the Report, “[t]he ALSC will address Canadian Task Group operations and the Canadian Forces limited indigenous ability to provide afloat logistics support, including sealift, to in-theatre forces in joint/combined or UN operations, and specialized support to other

¹⁴⁰ Stevens, *Sea Power Centre – Australia* . . . , 28-29.

¹⁴¹ Canada, *Estimates 1997-1998: Part III*, (Ottawa: Minister of Supply and Services, 1997): 2-13.

Government departments.”¹⁴² Therefore, the capability Canada needs to invest in is not another AOR, but a platform capable of delivering the aforementioned features.

Back in 1999, in order to clearly define the boundaries for the ALSC, deemed critical capability-platform in *Leadmark 2020*¹⁴³, the Maritime Operational Research Team (MORT) was asked to provide advice to the staff of the Project Management Office for the ALSC regarding the numbers and types of platforms required to conduct maritime logistics, sealift, and support to forces ashore missions for the Canadian Forces.¹⁴⁴ Elements such as the type of missions in which the ALSC were to be tasked, the frequency of the missions, mission duration, pre-deployment preparation, scenario locations, transit time, maintenance work periods, shore leave, and a variety of other factors that could constrain or otherwise influence the scheduling of the ships, were also considered.¹⁴⁵

In order to conduct the research, the historical fleet schedules from both coasts were utilized, covering the period of 1990 to 1999 as this period represented a high tempo for the RCN. From the schedules, a mimic program schedule was used to develop possible scenarios to determine what roles the ALSC would be required to perform – either AOR, Support to Forces Ashore, or Sealift – in future deployments as depicted in Table 2.3.¹⁴⁶ Table 2.3 clearly demonstrates that the ALSC capability would be a force multiplier to enable not only international HA missions, but as well a multitude of other operations at home and abroad. For instance, the results show that ALSC would be a vital asset for nine different scenarios, but most

¹⁴² Canada, *Estimates 1998-1999: Part III*, (Ottawa: Minister of Supply and Services, 1998): 39.

¹⁴³ Canada Chief of the Maritime Staff and Canada Canadian Armed Forces Maritime Command, *Leadmark: The Navy's Strategy for 2020: A Summary*, (Ottawa: Directorate of Maritime Strategy, 2001): 24.

¹⁴⁴ Burton, and Paul L. Massel, “Afloat Logistics and Sealift Capability . . . , i.

¹⁴⁵ *Ibid.*

¹⁴⁶ *Ibid.*, 3.

notably for scenarios 6, 7, 9, and 11. As for scenario 3, although data resulting from historical deployments show that only 2 instances of HA had occurred in a period of 10 years, the increase in frequency of HA missions in the following decade with *Operation Structure* (2004), *Operation Plateau* (2005), and *Operation Hestia* (2010) shows that the ALSC, had it been present, could have been used as an asset of choice for the transport of heavy equipment, and the support to forces ashore to the regions most affected.

Table 2.3 - ALSC Capabilities, Levels of Employment, and Scenario Frequency of Occurrence

Scenarios	ALSC Role			Level of Employment	Frequency of Occurrence
	AOR	SeaLift	Support to Forces Ashore		
1. Search and Rescue in Canada				●	
2. Disaster Relief in Canada			✓	●	
3. International Humanitarian Assistance			✓	●	
4. Surveillance, Control of Canadian Territory/Approaches				●	
5. Evacuation of Canadians Overseas	✓		✓	●	
6. Peace Support Operations (Chp 6) - Vanguard Battle Group (6A)	✓	✓	✓	●	
6. Peace Support Operations (Chp 6) - Company Level (6B)	✓	✓	✓	●	
7. Aid of the Civil Power				●	
8. National Sovereignty/Interests Enforcement	✓			●	
9. Peace Support Operations (Chp 7)	✓	✓	✓	●	
10. Defence of Canadian/US Territory	✓				
11. Collective defence	✓	✓	✓		

Source: Burton, and Paul L. Massel, “Afloat Logistics and Sealift Capability . . . , 6.

Another indication that the ALSC would be vital to facilitate humanitarian support in the future, and that deployments would be likely to increase, is from climate change as depicted in Figure 2.3. This Figure shows that over the past 100 years, a significant amount of natural

disasters occurred due to climate change, but what is noteworthy is the increase of these disasters from 1980 to 2018. Figure 2.3 shows that from 1980 to 2018, the amount of natural disasters increased from 133 to 282 respectively, and that this amount was at its highest in 2005 with 432 reported disasters.¹⁴⁷ Extracted from these numbers, and as depicted in Table 2.4, are the average floods, drought, extreme weather, and earthquakes which occurred between 1980 and 2018, as compared to those which occurred between 1941 and 1979, a span of 38 years. Table 2.4 indicates that the average number of natural disasters per year has increased significantly since 1980, and most notably those of floods.

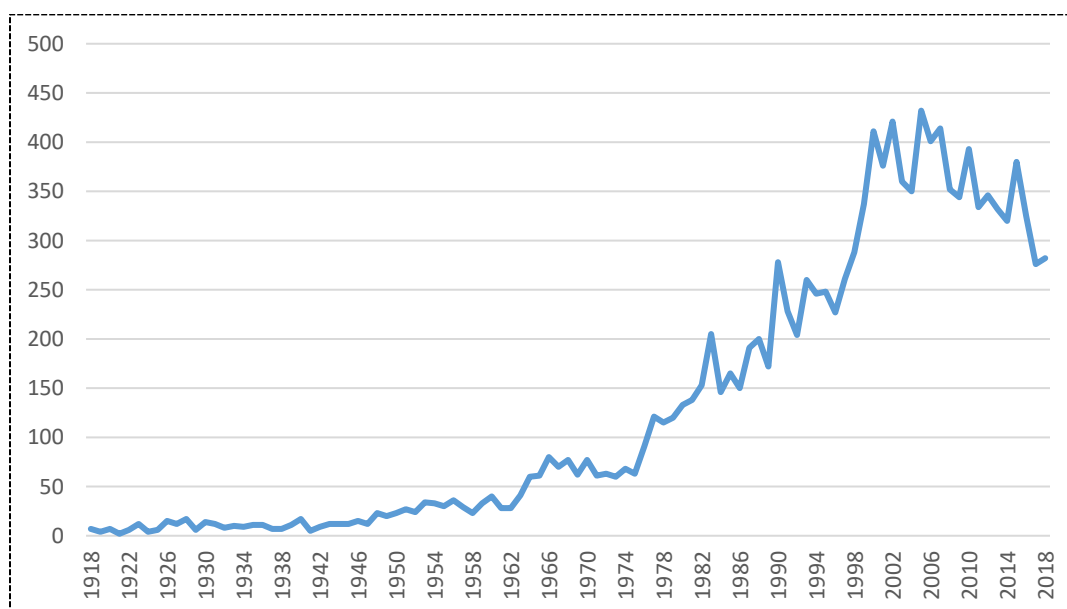


Figure 2.3 – Number of Recorded Natural Disaster Events, all Natural Disasters

Source: EMDAT (2019): OFDA/CRED International Disaster Database, Université catholique de Louvain – Brussels – Belgium

¹⁴⁷ Hannah Ritchie, and Max Roser, “Natural Disasters: Empirical View,” *Our World in Data*, (2019), <https://ourworldindata.org/natural-disasters>; V. Marier, “Ready to Help Through Peace-Support Ships” (Component Capabilities Course Paper, Canadian Forces College, 2019), 4.

Table 2.4 – Average Natural Disasters per Year Over 38

Average Natural Disasters per Year				
	Flood	Drought	Extreme weather	Earthquakes
1941-1979	13	3	17	7
1980-2018	113	15	86	25

In order to project the numbers and types of platforms required to conduct maritime logistics, sealift, and support to forces ashore, the MORT not only considered the roles the ALSC would play in 11 scenarios, but as well the pre-deployment preparation, scenario locations, and other factors, as previously stated, to determine the right amount of ALSC which would be required to increase the probability of success for all stated scenarios. The analysis concluded that at least 4 ships would be required to provide no worse than a 20% risk of not meeting platform requirements in theater, and that a 4 ship fleet would allow the average execution time of more demanding force planning scenarios (6, 9 and 11 together) to be under 60 days.¹⁴⁸ The analysis also recommended that the navy designed the ALSC to handle a wide range of missions, including those considered most stressing, such as scenario 11 where at least two ALSC would be required to achieve mission success.¹⁴⁹ These findings are commensurate with *Leadmark 2020* in which the need to develop such platform is presented. Notably, *Leadmark 2020* states:

The navy is responding to a developing requirement for an independent capability to transport Canadian troops and equipment with a project to build a multi-purpose ship. The ALSC is tasked primarily to ensure that continued at-sea logistics support will be available to naval ships and embarked helicopter detachments . . . it also is intended to include the ability to deliver the lead elements of a Canadian expeditionary force almost anywhere in the world accessible by sea. Other roles, including aviation support,

¹⁴⁸ Burton, and Paul L. Massel, “Afloat Logistics and Sealift Capability . . .”, 37. For a complete analysis, refer to pages 18-35 of the report.

¹⁴⁹ *Ibid*, 38.

humanitarian crisis response and a joint and (or) combined force headquarters capability, may be accommodated as well.¹⁵⁰

Although the capability for a sealift and support to forces ashore was addressed after the paying off of HMCS *Bonaventure* in 1970, the idea remained on hold until it was re-enacted during PM Jean Chrétien era. Under Paul Martin, Prime Minister from 2003 – 2006, this capability gained greater visibility, most notably that the AORs were approaching the end of their useful life, although this ambition was abated four years later when the Conservative Party was elected to power. The next two sections will discuss this topic as well as the two governments' policy, and the RCN's involvement in HA.

2005 – A Role of Pride and Influence in the World: Defence

After the terrorist attack on the World Trade Center in New York on 11 September 2001, the world was no longer the same; it had become increasingly uncertain. Therefore, after the attack, a significant amount of changes occurred in Canada's defence policy such as the requirement to provide greater security at home and abroad, address failed and failing states instability, and counter terrorism in Canada and in the world. To attain these objectives, emphasis was required on increasing the workforce of military and civilian personnel as well as transforming the CAF through the acquisition of new technology and equipment, and developing a workforce capable of delivering effects during operations through a unified forefront. As presented in *A Role of Pride and Influence in the World: Defence*, “[transformation] will require a fundamental change to the culture of our military to ensure a fully integrated and unified

¹⁵⁰ Canada Chief of the Maritime Staff . . . *Leadmark: The Navy's Strategy for 2020* . . . , 67.

approach to operations.”¹⁵¹ The key was to increase defence spending for new capital acquisitions, and integrate the navy, land, and air forces in a unified capability. The problem the new Liberal government faced in 2005 was not a lack of innovative ideas, but a lack of people to carry on the missions and to support those on operations, as the number of civilian and military personnel had been greatly curtailed in the previous decade.

In 1988, the workforce amounted to 87,786 and 33,089 military and civilian personnel respectively as compared to 61,740 and 23,018 in 2005.¹⁵² While the number and size of missions undertaken by military force relative to its strength¹⁵³ remained relatively consistent between 1980 and 1990 – as depicted in Figure 2.4 – the significant increase of operations after this period affected not only Canada’s commitments to the US, NATO, and the UN, but as well serving members and their families as challenging burdens were placed on them. To illustrate, in 2003, the Canadian government had to pause some operations to regenerate the skills and capabilities of military personnel and units, to refurbish, replace and upgrade equipment, and to achieve an appropriate balance between the demands of military service and the needs of [CAF] members and their families.¹⁵⁴ During this pause, the navy had to restrain its deployment with NATO as the navy was no longer able to deploy a naval task group of several ships, but only one until such time the regeneration process would be finalized. All in all, this meant that personnel needed to recharge, that hiring required momentum, and that training needed to follow its course to increase the skills required to continue to support ongoing and future operations. This also

¹⁵¹ Canada, Department of National Defence, and Canada, Ministère de la défense nationale, *Canada's International Policy Statement: A Role of Pride and Influence in the World*, (Ottawa: Government of Canada, 2005), 4.

¹⁵² Canada, *Estimates 1989-1990: Part III*, (Ottawa: Minister of Supply and Services, 1989): 75; Canada, *Estimates 2006-2007: Part III*, (Ottawa: Minister of Supply and Services, 2006): 104-105.

¹⁵³ Canada . . ., *International Policy Statement: A Role of Pride and Influence in the World* . . ., 7.

¹⁵⁴ Canada, *Estimates 2004-2005: Part III*, (Ottawa: Minister of Supply and Services, 2004): 8.

meant that deployments of naval forces would be curtailed to the capability of the fleet to be deployed, attending first to the defence of Canada and North America, followed by NATO's contribution to the war against terrorism. Prominently, for domestic operations, the navy was to conduct surveillance and control of Canada territory and approaches, maintain on each coast a "ready duty ship" capable of deploying rapidly on various missions, and increase its routine

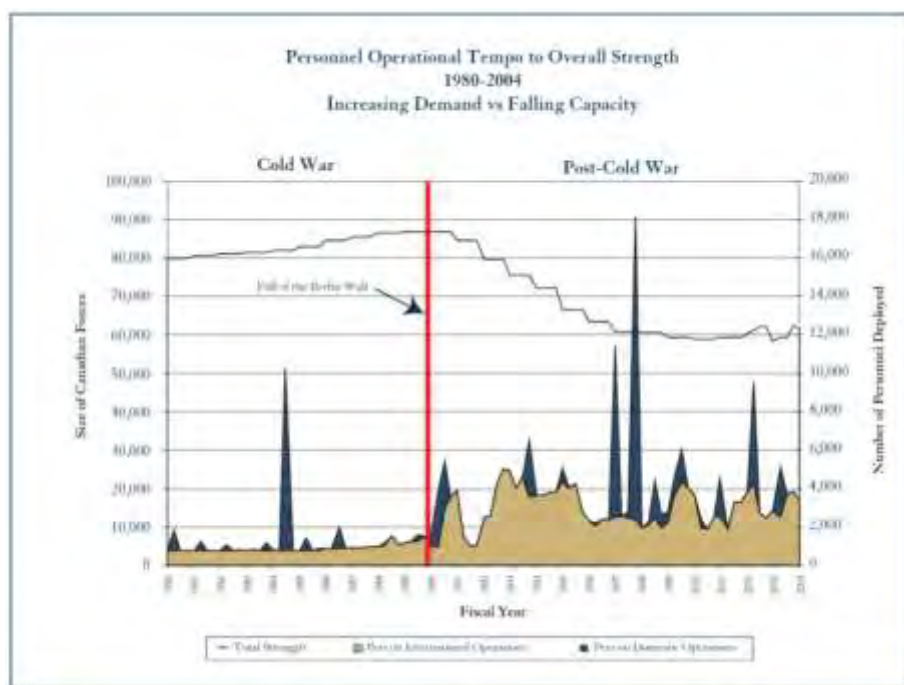


Figure 2.4 – Personnel Operational Tempo 1980 - 2004

Source: Canada, *Canada's International Policy Statement: A Role of Pride and Influence in the World*, 7.

presence and surveillance sea days by about 125 days a year, using most notably frigates.¹⁵⁵ For international operations, the navy was to provide assets to NATO and the UN, including assets for HA as required. The deployment of RCN assets in the US in 2005, after Hurricane Katrina struck a large area, is a prime example.

¹⁵⁵ Canada, *Estimates 2005-2006: Part III*, (Ottawa: Minister of Supply and Services, 2005): 21-22.

On 24 August 2005, southeast of Florida was placed on high alert since a tropical storm, Hurricane Katrina, was on its way. What followed resulted in dire devastation. In a period of six days, from 25 to 31 August 2005, Hurricane Katrina moved from southeast Florida to Louisiana, Mississippi, Alabama, and parts of Tennessee and Kentucky, damaging close to 90,000 square miles of land, in which 300,000 homes were destroyed, over 700,000 residents were displaced, and over 1,800 fatalities were pronounced.¹⁵⁶ As a response to Hurricane Katrina, the government of Canada announced on 2 September that 1,000 navy, army, air force and other personnel would be deployed in support of the disaster relief efforts. As such, on 6 September, HMCS *Athabaskan*, HMCS *Ville de Québec*, HMCS *Toronto*, and the Canadian Coast Guard Ship *Sir William Alexander* departed Halifax under *Operation Unison*.¹⁵⁷ After six days at sea, and before proceeding to the vicinity of Gulfport/Biloxi, Mississippi, the ships arrived in Pensacola, Florida and delivered supplies including 1,500 cots and sleeping bags, 2,000 blankets, 3,000 coveralls, 300 tents that could house 1,800 people, 6,000 diapers, palettes of lumber for reconstruction, water pumps, medical supplies, and about 1,000 body bags.¹⁵⁸ While on *Operation Unison*, close to 260 CAF personnel, including crew members, participated in the reconstruction efforts in the Biloxi area. After the ships had spent a few days in the vicinity of Gulfport, the ships started their journey back home, returning in Halifax on 18 September. *Operation Unison* was the largest humanitarian deployment the RCN has ever made, followed

¹⁵⁶ Tom Lansford, *Fostering Community Resilience: Homeland Security and Hurricane Katrina*, (Burlington, VT: Ashgate, 2013), 25.

¹⁵⁷ David Rubin, "Operation Unison-Canada's Help with Katrina – 2005," *Debt* 3 24, no. 6 (Nov, 2009): 20, <https://search.proquest.com/docview/214630476?accountid=9867>.

¹⁵⁸ "Operation Unison: [Final Edition]," *Examiner*, Sep 07, 2005, <https://search.proquest.com/docview/352698869?accountid=9867>; National Defence, "Backgrounder: Canadian Forces Support to Relief Efforts in Southern United States," last modified 16 September 2005, https://web.archive.org/web/20070214055302/http://www.forces.gc.ca/site/newsroom/view_news_e.asp?id=1739.

closely by *Operation Persistence* in 1998 where Canada deployed one AOR, one Frigate, four MCDVs, one submarine, and one minesweeper to assist with the Swissair Flight 111 crash.

While Canada participated in the relief efforts in New Orleans and its vicinity, other nations also participated in the rescue efforts such as Mexico. To assist in this rescue operation, the Mexican Navy sent [its amphibious ship], the [ARM] *Papaloapan*, carrying two helicopters, 8 all-terrain vehicles, 7 amphibious vehicles, 2 tankers, radio communications equipment, medical personnel, and 250 tons of food. Additionally, Mexican Army personnel were deployed to San Antonio, Texas, where they set up field kitchens and provided meals for the victims of Hurricane Katrina as they departed the devastated areas in and around New Orleans.¹⁵⁹ Overall, Canada provided a significant response after Hurricane Katrina hit the US, but Mexico, with its amphibious capability, was able to provide the sealift and support to forces ashore commensurate to the devastation and needs of the people most affected after Hurricane Katrina. For Canada to be significant in the world and to help those in need, Canada requires to invest in a multi-role capability to assist in HA efforts.

In 2005, when the RCN, among other Canadian contingents, was tasked to deliver humanitarian aid as part of *Operation Unison*, HMCS *Preserver* was in refit. The other AOR was on the West coast, so was unable to participate in the disaster relief efforts. Had the ALSCs or a similar platform been available in Canada, in a number sufficient for deployment, then perhaps one destroyer, two frigates, and one Coast Guard ship, as well as some air assets, would not had been necessary to deploy on *Operation Unison* since the multi-roles platform would have provided the sealift, and support to forces ashore required to help those most affected after

¹⁵⁹ Committee on Government Reform, *Looking a Gift Horse in The Mouth: A Post-Katrina Review of International Disaster Assistance* (Washington, DC: U.S. Government Printing Office, April 6, 2006), 41.

Hurricane Katrina. Moreover, the lead time to reach theatre for relief effort would have been faster had a multi-roles capability been available since the preparation of one ship vice four would have taken less time and fewer human resources would have been necessary to make the ship ready to deploy. Furthermore, less sailors would have been called to deploy, reducing as such the operational tempo of those most affected. Lastly, had a multi-roles ship been present in the RCN, it would have arrived faster in theatre, since a ship, sailing at 20 knots, usually reaches Florida from Halifax in four days.¹⁶⁰ Since the Task Group, which deployed from Halifax, had required six days to arrive in Pensacola, Florida, this presumes that the ships had necessitated refuelling along the way or that the weather was not permissible to navigate at 20 knots. Notwithstanding the latter, had a multi-roles platform been available, economy of effort would have been reached, and better use of resources would have transpired.

From the *Defence White Paper of 1994 to A Role of Pride and Influence in the World: Defence of 2005*, it became clear that a multi-roles platform or something somewhat similar was required. As part of the Canadian Forces transformation initiatives, maritime, land, air and special forces were to emphasize cooperation and teamwork at all levels to achieve a total effect, which had the aspiration of being greater than the sum of their individual parts.¹⁶¹ In order to achieve this aim, the navy had envisaged the acquisition of a ship capable of pre-positioning or deploying a Task Force, supporting land operations, providing a sea-based national or multinational command capability, deploying tactical unmanned aerial vehicles, and sustaining

¹⁶⁰ From the sea-distance.org website, it takes 4 days and 6 hours for a ship to sail at 20 knots from the port of Halifax, Canada to the port of Pensacola, United States.

¹⁶¹ Canada . . ., *International Policy Statement: A Role of Pride and Influence in the World* . . ., 12.

naval task group operations worldwide.¹⁶² From the study realized in 1999, the ALSC was deemed the asset of choice to fulfil the maritime requirement, and that at least four ships were required to provide at least a 80% chance that all platform requirements would be met on operations. As such, in 2004, Prime Minister Paul Martin announced that three JSS, formerly known as ALSC, would be designed, and that the provision of the necessary infrastructure and logistics support would be developed. This announcement was further amplified in the 2004-2005 estimates:

The JSS Project addresses a triple requirement: replacements for the Navy's aging fleet support ships, an enhanced sealift capability, and support for forces ashore. Fleet support is the key to the success of Canada's naval task groups, as support ships allow destroyers and frigates to remain at sea for prolonged periods. Surge sealift will enable the CF to respond quickly to short-notice taskings, while the support to forces ashore capabilities will provide a joint command and control capability at sea as well as a scalable hospital capability. The development phase of this project is already complete, and DND plans to begin the definition phase in the Fall.¹⁶³

Fundamentally, the JSS project, at an estimated cost of \$2.1 billion for three ships, was not only to replace a capability dated from the Cold War, but as well to respond to the need of integrating the forces together to combat the new threats in an effective, relevant, and responsive manner. Unfortunately, not all political parties envisioned the JSS in the same fashion, as depicted in the cancellation of the JSS project in 2008 under the Conservative Party. The next

¹⁶² *Ibid*, 13-14. A Standing Contingency Task force is a force capable of responding rapidly to emerging crises. It is a high-readiness task force, made up of existing, designated maritime, land, air and special operations elements, organized under a single integrated combat command structure, and ready to deploy with 10 days' notice. It provides an initial Canadian Forces presence to work with security partners to stabilize the situation or facilitate the deployment of larger, follow-on forces should circumstance warrant.

¹⁶³ Canada, *Estimates 2004-2005: Part III* . . . , 26.

section addresses the scale with which the JSS design and size were downsized, reflecting as such a familiar design commensurate with Cold War era capabilities.

2008 – Canada First Defence Strategy

In 2008, the war in Afghanistan was not over, and as such, a strong presence – “boots on the grounds from all elements” – was required in Afghanistan. The *Canada First Defence Strategy* (CFDS) clearly mandated the CAF to defend Canada, defend North America in cooperation with the US, and contribute to international security¹⁶⁴; international security reflecting the CAF’s contribution in Afghanistan, and to a number of operations with our allies and partners to protect and enforce peace and stability¹⁶⁵, including the provision of HA anywhere in the world as required. Canada’s participation in *Operation Horatio* and *Operation Hestia* in 2008 and 2010 respectively are two examples where the RCN assets were deployed as part of HA operations.

From 15 August to 8 September 2008, Haiti was hit by four tropical storms and hurricanes, namely Fay, Gustav, Hanna and Ike, destroying 22,702 houses, damaging 84,625 dwellings, affecting 165,337 families, and leaving 40,000 children without school due to complete/partial destruction of school structures.¹⁶⁶ As per *Canada First Defence Strategy*’s strategic roles for the CAF, and by extension the navy, the Government of Canada launched on 17 September, *Operation Horatio* to assist in the delivery of HA through some elements of the Joint Headquarters Kingston, and HMCS *St. John's*. HMCS *St. John's*, who was already

¹⁶⁴ Treasury Board of Canada Secretariat, “Section II: Analysis of Program Activities by Strategic Outcomes 2008-2009,” last modified 5 November 2009, <https://www.tbs-sct.gc.ca/dpr-rmr/2008-2009/inst/dnd/dnd02-eng.asp>.

¹⁶⁵ *Ibid.*

¹⁶⁶ ReliefWeb, “ACT Appeal Haiti: Emergency Response to Hurricanes Fay, Gustav, Hanna and Ike - LAHT81, Revision 1,” last modified 15 October 2009, <https://reliefweb.int/report/haiti/act-appeal-haiti-emergency-response-hurricanes-fay-gustav-hanna-and-ike-laht81-revision>.

deployed in the Caribbean on an anti-drug operation, was redeployed to the Haiti area. While on station, HMCS *St. John*'s loaded supplies in Port-au-Prince and then sailed to the southern peninsula of the country.¹⁶⁷ Once at the destination the ship anchored offshore while the embarked *Sea King* flew loads ashore. Altogether, the *Sea King* flew in excess of 20 aircraft missions and delivered more than 467 metric tons (300 cargo loads) of rice, corn-soya meal, bottled water, water purification tablets and other relief supplies to nine communities over a 13-day period.¹⁶⁸ The *Sea King* proved very useful as it was able to reach communities for which no other means of transport were available.¹⁶⁹ Figure 2.5 depicts the *Sea King*'s contribution during *Operation Horatio*.

Similarly, in 2010, another disaster hit Haiti, causing severe damages in the region. On 12 January 2010, an earthquake hit Port-au-Prince, killing 222,570 people, displacing close to 2.3 million citizens, including 302,000 children, and severely damaging/destroying at least 293,383 houses.¹⁷⁰ To remediate to the pain and suffering of those affected, Prime Minister, Stephen Harper, launched *Operation Hestia* on 13 January, sending close to 2000 military personnel on this operation including HMCS *Athabaskan* with an onboard *Sea King* helicopter, and HMCS *Halifax*. During this mission, HMCS *Athabaskan* was stationed off the coast of Léogane for 5 weeks, and HMCS *Halifax* was stationed of the coast of Jacmel for the same duration.¹⁷¹ During their time in theatre, both warships provided security and stability in and around their assigned

¹⁶⁷ Government of Canada, "Operation Horatio," last modified 11 December 2018, <https://www.canada.ca/en/department-national-defence/services/military-history/history-heritage/past-operations/caribbean/horatio.html>.

¹⁶⁸ ReliefWeb, ACT Appeal Haiti: Emergency . . . ; Government of Canada, "Operation Horatio," last modified 11 December 2018.

¹⁶⁹ Government of Canada, "Operation Horatio."

¹⁷⁰ ReliefWeb, *Haiti: Earthquakes - Jan 2010*, (n.d.), <https://reliefweb.int/disaster/eq-2010-000009-hti>.

¹⁷¹ Roger Annis, Exaggerated Claims: Assessing the Canadian Military's Haiti Earthquake Response, *The Canada-Haiti Information Project: Haiti Liberte*, Vol 3, no. 12, 6 October 2010, <https://canada-haiti.ca/content/exaggerated-claims-assessing-canadian-militarys-haiti-earthquake-response>.

areas, and the crews assisted local organizations with tasks such as clearing trees at the Jacmel airport to allow large transport aircraft to land, removing small amounts of rubble, and building latrines, kitchens and water distribution facilities.¹⁷² Although HMC Ships *Athabaskan* and *Halifax* responded quickly to the humanitarian emergency in Haiti, and that their crews' work



Figure 2.5 – Sea King Delivering Humanitarian Aid in Haiti 2008

Source: Canada, Government of Canada, *Operation Horatio*.

was essential in clearing debris and providing the restoration of essential services in Léogane and Jacmel, the supplies that both ships could have transported to the Haitian population was simply not there. On 12 January, with only 24 hours to prepare for deployment, supplies were embarked

¹⁷² *Ibid.*

onboard the two warships, but only to help the crews with their main humanitarian efforts once ashore in Haiti. CTV News further amplified in their article, “[Captain (N)] Art McDonald, the Canadian Task Group Commander of both HMCS *Athabaskan* and HMCS *Halifax*, said . . . when we arrive we're going to bring some unique maritime capabilities, specifically we can offer Haiti the light engineering kind of work -- clearing roads and enabling critical infrastructure so aid can flow through¹⁷³,” meaning that when the Government of Canada announced that two warships would be deployed on *Operation Hestia*, that only a symbolic value would be provided, and not necessarily the essential medical support, potable water, food, shelters, hygiene, and engineer support the Haitian people most needed. Had the ships been provided more time to prepare, or better, had a multi-roles or JSS ship been available for deployment as part of the fleet, a considerably larger amount of supplies would had been possible for transportation into theatre considering the magnitude of the emergency. Vessels such as destroyers and frigates can carry a few hundred tonnes of supply, although a multi-roles vessel, had it been present in Canada’s fleet mix, would had been large enough to also move cargo or vehicles or both in sufficient quantities to make a major difference in a situation like Haiti.¹⁷⁴ Similarly during *Operation Horatio*, had a platform commensurate to the relief effort been available, greater flexibility would had been present to unload critical supplies to the Haitian population through landing craft, and less reliance would had been necessary on the aging *Sea King*. Humanitarian disasters such as those observed in 2008 and 2010 reinforce the value of acquiring a multi-roles platform (or a fully integrated JSS).

¹⁷³ CTV News, “Canada to send 1,000 soldiers to Haiti,” last modified 19 May 2012, <https://www.ctvnews.ca/canada-to-send-1-000-soldiers-to-haiti-1.473802>.

¹⁷⁴ Canadian Naval Review, “Volumetrics and Strategic Effect,” last modified 16 February 2010, <https://www.navalreview.ca/2010/02/volumetrics-and-strategic-effect/>.

The requirement for the acquisition of JSS took form under the previous two governments as the AORs necessitated replacement and that a new capability with sealift and support to forces ashore was required to enable joint capability. In 1999, and as seen previously, a study was completed reaching the conclusion that four ALSC (JSS) were required to meet 80% of all platform requirements on missions. In a similar vein, in the 2007-2008 time frame, another technical report was completed, the Fleet Mix Study Iteration II. The aim of this study was to explore a specified set of fleet options, based on future ship concepts, namely the Chief of Maritime Staff's "Target" fleet, and the Canada First Defence Strategy (CFDS) fleet, while minimizing political risk.¹⁷⁵ The political risk is a combined measure of the political impact and frequency of failing to meet the navy's objectives on the Canadian government.¹⁷⁶ Basically, political risk is impacted if the supply (assets) for a given scenario (an operation) is not commensurate with or is not available for the operation at hand. If the political demand for Arctic surveillance is dictated through policy, and that no frigates, MCDVs or Arctic/Offshore Patrol Ships (AOPS) are available to perform this operation, then the political risk will be significant as failure of operation will result.

In order to assess the political risk of both fleet mix options, 54 maritime vignettes were developed, forming the basis of demand.¹⁷⁷ A vignette is an operation or an exercise such as a Task Group Exercise (TGex), and a demand is the fleet mix required to enable the vignette to reach mission success. As part of both the Target and CFDS options, several future ship concepts were considered for the "Navy After Next" as well as the amount of platforms each option was

¹⁷⁵ Alex Bourque, and Cheryl Eisler, "Fleet Mix Study Iteration II: Making the Case for the Capacity of the "Navy After Next"," *Defence R&D Canada: Center for Operational Research and Analysis*, (Ottawa, ON: Defence Research and Development Canada, 2010): iii.

¹⁷⁶ *Ibid.*

¹⁷⁷ *Ibid.*, iv.

considering as fleet mix as shown in Table 2.5.¹⁷⁸ Of note, and although the MCDVs and the submarines (SSK) were not considered new assets, they formed part of the table for both fleet mix proposals since their capability remained essential in the attainment of political objectives.

Table 2.5 - Subject Matter Experts - Proposed Fleet Compositions

Fleet Mix Options																		
Options	MH		AOPS		MCDV		SSK		JSS		LMS		CSC					
													C2AD		MP		CSC	
	East	West	East	West	East	West	East	West	East	West	East	West	East	West	East	West	Sub-Total	
Target	8	7	5	3	3	3	2	2	2	1	1	1	2	2	6	6	16	
CFDS	8	7	5	3	6	6	2	2	2	1	0	0	2	1	7	5	15	

Source: Bourque, and Cheryl Eisler, “Fleet Mix Study Iteration II: Making the Case for the Capacity of the “Navy After Next”, 14, 27.

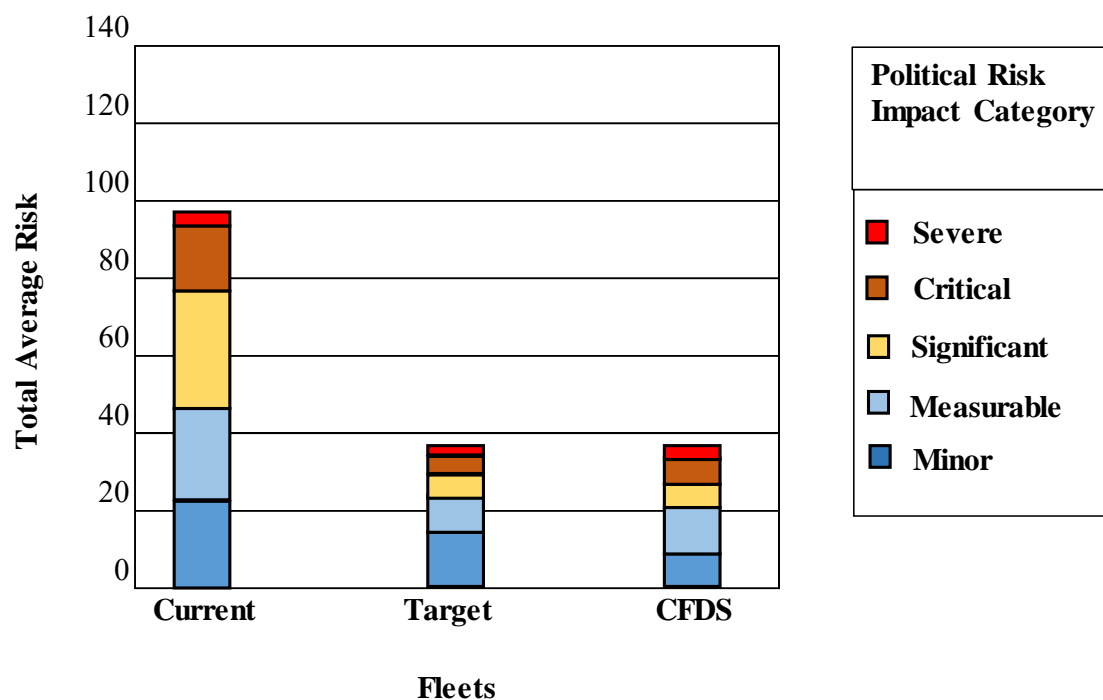
Table 2.5 shows that several similarities exist between the Fleet and the CFDS options, but that differences in the amount of platforms exist as well such as those for MCDVs, Littoral Manoeuvre Ships (LMS), Command and Control/Air Defence Canadian Surface Combatants (C2AD CSC), and Multi-Purpose CSC (MP). As depicted in Table 2.5, the Target option recommended a total of six MCDVs as compared to 12 for the CFDS option. Similarly, the Target option suggested the acquisition of LMS to meet the high-end requirements for amphibious operations and exercises, and the requirement for Sea Basing and Expeditionary capabilities.¹⁷⁹ As for the CSC, CFDS proposed the acquisition of 3 C2AD CSC vice 4 as depicted for the Target option. Altogether, the end goal of these two recommended options, namely the Target and CFDS fleets, was to derive the “Navy After Next”, considering all possible vignettes, thus matching all potential future fleet demands (operations) with all available supply (future and existent platforms) to minimize political risk. Table 2.6 depicts the risk

¹⁷⁸ MH stands for Maritime Helicopters. For a function of each platform, refer to Bourque, and Cheryl Eisler, “Fleet Mix Study Iteration II: Making the Case for the Capacity of the “Navy After Next.”

¹⁷⁹ Bourque, and Cheryl Eisler, “Fleet Mix Study Iteration II . . . , v-vii.

comparison for both the Fleet and CFDS, as well as for the current fleet.¹⁸⁰ As shown in Table 2.6, both the Fleet and CFDS options outperformed the current fleet mix, and resulted in similar political risk across all vignettes, with the Fleet option being optimal, most notably due to the LMS capability to provide amphibious capability for support ashore and Sea Basing.

Table 2.6 - Fleet Option Risk Comparison



Source: Bourque, and Cheryl Eisler, “Fleet Mix Study Iteration II: Making the Case for the Capacity of the “Navy After Next”, v.

When considering all future ship concepts, four platforms were prominent in the study: the LMS, CSC, AOPS and JSS. The study demonstrated that for fleet optimization, three or four AOPS were sufficient to address the demand, provided enough MCDV were available for training.¹⁸¹ It also concluded that although there was little impact of having four over three JSS, a

¹⁸⁰ The current fleet was the fleet in 2008 with 3 destroyers, 12 frigates, 2 AORs, 12 MCDVs, 4 SSK, and 15 *Sea Kings*. Figure has been reproduced for clarity and was derived from page v of the report.

¹⁸¹ Bourque, and Cheryl Eisler, “Fleet Mix Study Iteration II . . . , vii.

significant decline in responsiveness was found in having only two rather than three JSS.¹⁸² In both the Fleet and CFDS options, three JSS were proposed for fleet sustainment, although in a period of nine years, the requirement changed drastically. No more was a requirement for an enhanced sealift and joint capability. Once again, as seen with the acquisition of the Oberon-class submarines in the late 60s, a capability would be procured, although it would not meet all the requirements as stipulated in Canada's defence policy; forgoing once more Canada's ability to project power at sea and help in time of need.

Between 2006 and 2015, the Conservative Party announced the acquisition of several new platforms including the acquisition of JSS.¹⁸³ In 2006, it was reported that the JSS project was in Definition Phase and that an Effective Project Approval was sought in Fall 2008.¹⁸⁴ A year later, an announcement was made that the first multi-role vessels would be delivered in 2012 to replace the aging AORs, and that the JSS would be capable of supporting not only other ships, but as well the land and air forces operating from these ships.¹⁸⁵ The vessels were to have the following characteristics: a design displacement of 35,000 tonnes; 2,500 lane meters of deck space and a container system; a capability to deliver a considerable amount of fuel, ammunition and water; a capacity to support a joint force headquarters; facilities to carry four maritime helicopters; and an a capability to operate independent of a jetty, using either a lighterage system

¹⁸² *Ibid*, 3. In the study, the JSS were treated as having the same capability as the current AOR since it was assumed that merchant ships would be available to provide the sealift required to bring equipment into theater.

¹⁸³ The Conservative Party also announced the acquisition of 6-8 AOPS, 15 CSC, and the modernization of the 12 Frigates under the Halifax-Class Modernization and Frigate Life Extension (FELEX). No LMS was announced.

¹⁸⁴ Canada, *Estimates 2006-2007: Part III*, (Ottawa: Minister of Supply and Services, 2006): 46. The project announced was for 3 JSS.

¹⁸⁵ Canada, *Estimates 2007-2008: Part III*, (Ottawa: Minister of Supply and Services, 2007): 37.

or a well deck.¹⁸⁶ As previously stated, in a short period, this procurement strategy changed drastically.

In 2008, an initial attempt at a competitive procurement for the JSS project failed as all bidders' submissions exceeded the established financial ceiling the Government of Canada had set for the acquisition of three JSS. The main causes for the drastic change in bidders' submissions were soaring labour and material costs.¹⁸⁷ This in turn necessitated a rethinking of the procurement strategy, which resulted in the acquisition of two JSS instead of three with diminished capability. The new ship essentially were downsized to provide core replenishment, underway medical-support to naval task groups, limited sealift capabilities, and limited support to forces ashore.¹⁸⁸ Basically, the new JSS was to resemble the former AOR, but with meager enhanced capabilities such as the addition of a limited container capacity. Costs, as well as other various procurement strategies and operations, such as the one in Afghanistan, had driven the downsizing of the JSS, and with it, its sealift and joint capability to provide, for example HA, had been forgone. Essentially, without the capability of self-unloading alongside and at anchor using landing craft, and of carrying up to 7,500 lane meters¹⁸⁹ of equipment and supplies into theatre, Canada's ability to operate effectively and jointly would continue to be impaired, and as a result would continue to have a direct impact, as demonstrated in recent years, on Canada's

¹⁸⁶ Canadian Naval Review, "JSS adrift in a Strategic Black Hole*," last modified 23 September 2011, <https://www.navalreview.ca/2011/09/jss-adrift-in-a-strategic-black-hole/>. This project called for three or four ships, each able to carry 8,000 to 10,000 tonnes of fuel, 500 tonnes of JP 5 aviation fuel, 300 tonnes of ammunition and 230 tonnes of potable water; Burton, and Paul L. Massel, "Afloat Logistics and Sealift Capability . . . , 1. A lane is 2.5 meters long. A lane-meter is a unit of area 1 lane by 1 meter or 2.5m square.

¹⁸⁷ Treasury Board of Canada Secretariat, "Section II: Analysis of Program . . . 2008-2009."

¹⁸⁸ Office of the Parliament Budget Officer, *Feasibility of Budget for Acquisition of Two Joint Support Ships* (Ottawa: Canada, 2013), 2, 27.

¹⁸⁹ 7,500 lane meters is for three JSS having 2,500 lane meters each.

place in the world.¹⁹⁰ Moreover, with a maximum of 3,000 lane meters¹⁹¹ between the two JSS, Canada would continue to remain at the mercy of air assets and commercial sealift for shipments of cargo into theatre of operations. Canada has frequently used merchant vessels in the past for the transportation of heavier military equipment as they proved to be quite useful and cost-effective, although they pose some challenges. First, the lead time given for military forces to deploy into theatre may be insufficient for the contracting and the timely positioning of commercial sealift. Second, merchant ships may need some protection in transition for safety of military cargo. Lastly, civilian vessels are subject to civilian business disputes concerning labour conditions, ownership, and the like.¹⁹² This was demonstrated in the summer of 2000 where military equipment valued at \$233 million were held hostage aboard *GTS Katie*, a commercial sealift. Resolution came forth after personnel from HMCS *Athabaskan* stormed the ship and brought her forcibly into port.¹⁹³ This incident demonstrates the requirement for adequate military assets for sealift transportation.

In 2008, the Conservative Party announced that for the next 20 years, the military would have a stable, and predictable funding, capable of procuring assets such as three JSS to carry out missions with fully integrated, flexible, multi-role and combat-capable military capabilities.¹⁹⁴ This vision was short lived with the announcement of the downsizing and diminished features of the JSS. In reality, this means that in 2023, when the first JSS is commissioned, the RCN will

¹⁹⁰ Szeto, Barry Cooper, and Fraser Institute, *The Need for Canadian Strategic Lift . . .*, 13. This was demonstrated in East Timor where an ALSC would had been the asset of choice for a joint and integrated force.

¹⁹¹ The Maritime Executive, “Keel Laid for Royal Canadian Navy’s Future Joint Support Ship,” last modified 16 April 2020, <https://www.maritime-executive.com/article/keel-laid-for-royal-canadian-navy-s-future-joint-support-ship>. There will be a maximum of 1,000 - 1,500 lane meters of deck space for carrying vehicles and containerized cargo for the new JSS. This figure is per JSS.

¹⁹² Szeto, Barry Cooper, and Fraser Institute, *The Need for Canadian . . .*, 11.

¹⁹³ *Ibid.*

¹⁹⁴ Department of National Defence and Canada, Ministère de la défense nationale, *Canada First Defence Strategy*, (Ottawa, ON: National Defence, 2008): 3-4.

have a new capability, commensurate of Cold War era, capable of sustaining warships at sea, while depending on other navies for amphibious capabilities and merchant vessels for sealift capacity. Three fully integrated JSS, capable of sustainment, sealift, and support to forces ashore is what the RCN requires to fully meet the requirements for joint operations, including those for peace support operations. The support that a fully integrated JSS could have provided on operations such as *Operation Deliverance*, *Operation Toucan*, and *Operation Horatio*, just to name a few, would have contributed to greater flexibility and capability to forces ashore in their efforts to assist in alleviating the pain and suffering of those most affected.

2017 – Strong, Secure, Engaged: Canada’s Defence Policy

In 2015, the Liberal Party was elected into Parliament and published in 2017, *Strong, Secure, Engaged: Canada’s Defence Policy*. The policy was clear in its engagement for Canada to be strong at home, secure in North America, and engaged in the world.¹⁹⁵ Strong at home meant that the CAF would defend Canada’s sovereignty and assist in times of natural disaster, other emergencies, and search and rescue; Secure in North America implied that Canada would actively participate and renew its defence partnership in North American Aerospace Defense Command (NORAD) and with the US; while Engaged in the world, indicated that the CAF would contribute to a more stable, peaceful world, including through peace support operations and peacekeeping.¹⁹⁶ Peace support operations (PSO) are those operations where resources are provided for peace building, including the provision of HA to those in need. As part of Canada’s participation in the world, *Strong, Secure, Engaged* provided the RCN with definite mandates, including those of contributing to humanitarian relief assistance should the scale of human

¹⁹⁵ Department of National Defence and Canada. Ministère de la défense nationale, *Strong, Secure, Engaged: Canada’s Defence Policy*, (Ottawa, ON: National Defence = Défense nationale, 2017), 6.

¹⁹⁶ *Ibid*, 14.

suffering [was] such that local and international civilian resources [could not] cope.¹⁹⁷ As such, in 2015, HMCS *St. John's* deployed to the Caribbean as part of *Operation Renaissance Irma Maria*, and in 2016, HMCS *Vancouver*, who was in the vicinity of New Zealand, provided emergency relief operations after a severe earthquake hit the South region.

In 2015, two severe hurricanes, namely Irma and Maria, devastated a major part of the Caribbean damaging several infrastructures and houses, and leaving numerous people homeless. As part of Canada's engagement in PSOs, the Canadian Government sent, among other Task Forces, a Maritime Task Force composed of HMCS *St. John's* and her CH-124 *Sea King* helicopter to the Turks and Caicos, and Dominica Islands to help with the relief efforts. While in theatre, from 9 September to 15 October, HMCS *St. John's* crew provided assistance to the local population by removing debris, restoring power and water sources, scouting the area, conducting repairs on land, delivering water to locals, and assessing underwater damage.¹⁹⁸ HMCS *St. John's* also produced about 27 000 litres of water using her desalination system to provide to those in need.¹⁹⁹ During this operation, the *Sea King*, as part of the Task Force, delivered a copious amount of water, supplies, and about 157 000 pounds of cargo to the affected areas.²⁰⁰

In the same vein, HMCS *Vancouver*, with her embarked *Sea King* and air detachment, provided HA to New Zealand after a severe earthquake struck the South Island on 14 November 2016. HMCS *Vancouver*, who was in the vicinity of Auckland, New Zealand, at the time of the 7.8 magnitude earthquake, was preparing for a goodwill visit to celebrate the 75th anniversary of

¹⁹⁷ Department of National Defence and Canada, Ministère de la défense nationale. *Canadian Defence Policy*, (Ottawa: Department of National Defence, 1992), 3-35.

¹⁹⁸ Government of Canada, Operation Renaissance Irma Maria, last modified 18 December 2017, <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/recently-completed/operation-renaissance-irma-maria.html>.

¹⁹⁹ *Ibid.*

²⁰⁰ *Ibid.*

New Zealand's Naval Forces with other allied naval forces.²⁰¹ At the request of the Government of New Zealand, the ship diverted to the area of Kaikoura to assist in the delivery of emergency supplies, and provided repairs to damaged infrastructure.²⁰² While in proximity of Kaikoura, the ship contributed to the evacuation of approximately 900 people and delivered more than 216 tonnes of food and emergency supplies such as generators, portable pumps, and portable chemical toilets.²⁰³

As depicted in the former two examples, the ships responded to the call of duty, engaging with the citizens through acts of goodwill after the damaging hurricanes and earthquake struck the Caribbean and New Zealand respectively. Although, while these warships alongside provided an impressive and “up close” example of national “hard power” competence, and that their crew's actions provided stirring examples of “soft power” in action²⁰⁴, these warships, while capable of delivering the “hands-on” capability on land, remained nonetheless ill-suited to transport large equipment and cargo into theater, and to land personnel and logistics support through sea-going platforms to shore, leaving as such all lift capability to a single point of failure, the embarked *Sea King*. In these two previous examples, and as seen previously during other operations such as *Operation Toucan*, the maritime helicopters were vital in providing the airlift capability in the absence of the sealift feature in these ships. The lack of proper platforms to provide sealift and support to forces ashore clearly demonstrates the requirement for such capability, and that not only from the perspective of providing adequate support during

²⁰¹ Government of Canada, Emergency Relief Operations Conclude in New Zealand, last modified 6 July 2018, <http://www.rcaf-arc.forces.gc.ca/en/article-template-standard.page?doc=emergency-relief-operations-conclude-in-new-zealand/ivqxgs5y>.

²⁰² *Ibid.*

²⁰³ *Ibid.*

²⁰⁴ Canada. Ministère de la Défense nationale, Canada. Marine royale canadienne, Canada. Royal Canadian Navy, and Canada. Department. of National Defence. *Leadmark 2050: Canada in a New Maritime World* (Ottawa: National Defence, 2017), 21.

humanitarian crisis, but as well providing the joint capability required to operate across a large spectrum of operations.

In 2017, *Canada's Defence Policy* announced a new approach to defence, that of being able to anticipate potential threats to Canada and Canadian interests, adapt to emerging challenges by harnessing new technologies, and act with decisive military capability across the spectrum of operations to defend Canada, protect Canadian interests and values, and contribute to global stability.²⁰⁵ Contributing to global stability encompasses the ability to deploy military capability in response to international disasters and major emergencies, including HA relief efforts, through CAF elements including the DART, and scalable additional support such as the RCN ships.²⁰⁶ Although, with the paying off of the last three destroyers of the Iroquois-class and the two Protecteur-class AOR ships between 2015 and 2017, Canada's ability to contribute to global stability has been restrained since, resulting in less flexibility for the navy to participate in operations such as HA relief efforts. This was demonstrated in 2018 where the Canadian Interim Auxiliary Replenishment Vessel (iAOR) – MV *Asterix* was operating in the Pacific, but was not being used in the relief efforts in Indonesia after a magnitude 7.5 quake and tsunami hit the region, leaving close to 200,000 needing assistance of food, water, fuel and medicine.²⁰⁷ The iAOR, which was operating off the coast of Vietnam, had not received a request to support the tsunami destruction zone in Indonesia from the Government of Canada, and as such was not deployed in the region.²⁰⁸ Instead, to help with the relief effort in Indonesia, Canada dispatched an A400M aircraft and a team of military experts from the Middle East, and contributed \$1.5

²⁰⁵ Department of National Defence . . . *Strong, Secure, Engaged* . . . , 63.

²⁰⁶ *Ibid.*, 34, 81.

²⁰⁷ David Pugliese, "Canadian Supply Ship in the Pacific but not Being Used in Tsunami Relief Efforts," *Ottawa Citizen*, 4 October 2018, <https://ottawacitizen.com/news/national/defence-watch/canadian-supply-ship-in-the-pacific-but-not-being-used-in-tsunami-relief-efforts/>.

²⁰⁸ *Ibid.*

million in emergency assistance to support humanitarian organizations responding to the aftermath of the earthquake.²⁰⁹ This case illustrates that with only limited platforms for deployment, with no redundancy, that other operations may suffer as a consequence, increasing as such Canada's risk of not being able to meet all of its simultaneous commitments as depicted in *Strong, Secure, Engaged*.

The iAOR ship came about as a bridge replacement following the early retirement of HMCS *Preserver* in 2016. HMCS *Preserver*, the last of the Protecteur class supply ship, was paid off prematurely in October 2016, leaving the RCN with major capability gaps such as replenishment at sea, limited sealift capacity, [HA]/disaster relief functions, and medical/dental services.²¹⁰ This gap was rectified on the East coast in 2018 with the transformation of a commercial container ship (MV *Asterix*) into an iAOR ship.²¹¹ This platform currently performs the same duties as the retired AOR, and provides the RCN with strategic at sea services, although, it has limitations. First, the MV *Asterix* cannot deploy in task group operations and serve at the same time on a humanitarian mission, due to its lack of redundancy.²¹² Currently, Canada has only one iAOR, and will remain this way until at least 2023 when the first JSS joins the fleet.²¹³ This translates into a three-year gap in which Canada will have to rely on allies and partners around the world for at sea replenishment support of Canadian warships while multiple at sea operations take place concurrently. Second, being a commercial vessel, the MV *Asterix* does not meet all military requirements in the areas of performance, in-service lifespan and survivability, precluding it from operating in high risk areas, thus limiting Canada's flexibility to

²⁰⁹ *Ibid.*

²¹⁰ House of Commons, Standing Committee on National Defence, *The Readiness of Canada's Naval Forces*, no. 42, June 2017, 1:25.

²¹¹ *Ibid.*, 1:44.

²¹² Marier, "Ready to Help . . .", 2.

²¹³ *Ibid.*

meet all requirements in sea operations.²¹⁴ Lastly, because the MV *Asterix* is contracted to provide service support for a five-year base period with five one-year options for extension, as per the Canadian Government awarded contract in 2015²¹⁵, its service capability is finite, which means that in 2025, when the last option is exercised, the iAOR may be precluded from continuing to serve the fleet, and that even if the second JSS, scheduled for delivery in 2025, is delayed. This latter concern clearly shows the need for Canada to envision options for contract amendment to extend the lease of the platform or buy the iAOR out right for the continuous provision of support for sea operations and other requirements such as HA as published in *Strong, Secure, Engaged: Canada's Defence Policy*

As previously discussed, Canada's ability to deploy military capability in response to international disasters, including HA relief efforts, has been demonstrated on several occasions through the deployment of RCN ships, but other CAF elements, including the RCAF and the DART, have also been deployed to support such relief efforts. For example, in 1980, the RCAF airlifted clothing for earthquake survivors to Algeria after an earthquake with a magnitude of 7.3 struck, killing 5,000 people and injuring 9,000.²¹⁶ The DART was deployed to the Philippines in 2013 to assist in the relief efforts following typhoon Haiyan, which killed many people, and injured several others.²¹⁷ The response to the earthquake in Haiti in 2010 saw a combined force of two Canadian naval ships, aircrafts, the DART, and the Canadian Red Cross. However,

²¹⁴ Government of Canada, Procurement, last modified 7 April 2020, <https://www.canada.ca/en/department-national-defence/corporate/reports-publications/proactive-disclosure/cow-estimates-a-2019-20/procurement.html#toc1>.

²¹⁵ Naval technology, "Resolve Class Auxiliary Oiler Replenishment (AOR) Vessel," (n.d.), <https://www.naval-technology.com/projects/resolve-class-auxiliary-oiler-replenishment-aor-vessel/>.

²¹⁶ Department of National Defence, "Algeria 1980," last modified 18 July 2019, <https://www.canada.ca/en/department-national-defence/services/military-history/history-heritage/past-operations/africa/algeria-1980.html>; Marier, "Ready to Help . . .6.

²¹⁷ Department of National Defence, "Disaster Assistance Response Team (DART) Deployments," last modified 9 October 2018, <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/types/dart/deployments.html>; Marier, "Ready to Help . . .6.

although these elements have contributed to a great extent to HA abroad, each capability has its drawbacks. The DART is a highly specialized team, but is limited in personnel and cannot always provide medical care without the permission of state licensing agencies.²¹⁸ Aircraft, such as the CC-177s, are useful for delivering relief supplies, but they are expensive to operate and depend on functioning airfields. Moreover, these assets are limited in their capacity to carry a copious amount of supplies as compared with amphibious ships. Further, with an RCAF fleet of just five CC-177s, it would be unlikely that more than two would be available at short notice for a [significant HA] operation.²¹⁹ As for the RCN ships, as mentioned previously, with only one operational iAOR at the moment, and an aging fleet of frigates with no capability of Roll-on/Roll-off (Ro-Ro), it would be difficult to imagine that Canada could quickly respond to a major HA event, let alone that Canada must be able to concurrently respond to domestic and international operations as stated in Canada's Defence Policy. Furthermore, although supply ships and frigates have substantially contributed to HA in the past, their functions are primarily replenishment at sea and war fighting, thus the need for a Canadian dedicated *maritime* capability to provide [HA] relief, including a joint capability force, is present.²²⁰

In 2015, when the Liberal party took office, there was no appetite to procure a third JSS, or a platform commensurate to a joint capability, capable of providing sealift capacity and support to forces ashore in operations, even if this capability had often appeared as a requirement in different publications. For example, *Leadmark 2050*, published in 2016, suggested that "...among the more immediate platform priorities in the pre-2035 period is the requirement to

²¹⁸ Joseph Scanlon, Elizabeth Steele, and Alex Hunsberger, "By Air, Land, and Sea: Canada Responds to Hurricane Katrina," *Canadian Military Journal* 12, no. 3 (Summer 2012): 56; Marier, *Ready to Help* . . . , 6.

²¹⁹ Kevin McCoy, and Tom Tulloch, "Why Canada Needs a Humanitarian Assistance and Disaster Relief Ship." *Canadian Naval Review* 13, no. 1 (2017): 5.

²²⁰ *Ibid*, 6; Marier, "Ready to Help . . . 6.

broaden the fleet's ability and flexibility to conduct operations ashore, across a range of peace-support missions ... including [HA] and disaster relief..." A "ship [that] would act as a seabase, with features that include a substantial sealift capacity to move personnel, vehicles, force logistics and humanitarian materiel into theatre. There would be equipment to embark/disembark cargo as well as transfer cargo at sea, and deck space to accommodate and operate medium- or heavy-lift aircraft and landing craft."²²¹ Such a vessel, suggested *Leadmark 2050*, "would likely be among the most heavily used assets in the future [CAF]."²²² Former Chief of Defence Staff Rick Hillier expressed similar sentiments in 2005 when he stated that the RCN should buy a ship similar to the San Antonio-class to drastically improve the Navy's strategic sealift capabilities and its ability to respond to crises in the twenty-first century.²²³ Albeit these recommendations for the acquisition of a multi-purpose capability, capable of addressing multiple requirements simultaneously, the Harper and Trudeau governments opted for the acquisition of 6 AOPS, two less performant JSS, and 15 CSC in lieu, with final delivery dates of 2024, 2025, and 2040 respectively. Although these ships will be key to revitalize the current aging fleet, the strategic sealift and support to forces ashore will still be missing, thus leaving Canada, as it has always been, at the mercy of other navies for amphibious capabilities and merchant vessels for sealift capacity, unless Canada is ready for a change.

²²¹ Canada. Ministère de la Défense . . . , *Leadmark 2050: Canada in a New Maritime World* . . . , 46-47.

²²² *Ibid*, 47.

²²³ Christopher Cowan, "A New 'Big Honking Ship': Why Canada Should Procure an Amphibious Assault Ship (Part I/V)," *The NATO Association of Canada*, 26 July 2014, <http://natoassociation.ca/a-new-big-honking-ship-why-canada-should-procure-an-amphibious-assault-ship-part-iv/>.

CHAPTER 3 – HUMANITARIAN ASSISTANCE & OTHER NAVIES CAPABILITIES

INTRODUCTION

In the past few decades, the Netherlands, Japan, Singapore, South Korea, UK, Australia, China, Spain, India, and New Zealand have boosted their capabilities to respond to the naval missions of the 21st Century. Not only these navies have prepared the way for different missions involving strategic deterrence, power projection, sea control, naval diplomacy, security of the homeland and constabulary missions, but as well they have prepared for [HA] crisis.²²⁴ These navies, among other capabilities, have incorporated sealift, support to forces ashore, landing craft, and Auxiliary Oiler Replenishment features as seen on the newly *Karel Doorman* JSS in the Netherlands. Canada on the other hand, does not have the sealift, nor the support to forces ashore capability in its fleet and it seems that Canada does not have the intention to possess such capability, although a depicted in Table 3.1, solutions exist. Table 3.1 shows that other navies have invested in such capabilities; perhaps examples for Canada to emulate. The next section discusses other navies capabilities and provides insights on these procurement strategies and possible solutions for Canada.

Other Navies Relief Ships Capabilities

Canada is the only G-8 Country, besides Germany, that does not possess an amphibious

²²⁴ Peter T. Haydon, and Dalhousie University. Centre for Foreign Policy Studies. *Sea Power and Maritime Strategy in the 21st Century: A Medium Power Perspective*. Vol. no. 10 (Halifax, N.S: Centre for Foreign Policy Studies, Dalhousie University, 2000): 59.

capability. As shown in Table 3.1²²⁵, the Netherlands, Japan, Singapore, South Korea, UK, and Australia all have small numbers of amphibious ships. In recent years, other countries such as China, Spain, India, and New Zealand have also procured amphibious vessels. In 2006, China improved its fleet through the acquisition of the Type 071 Yuzhao-class landing platform dock (LPD). At 17,600 tonnes, this ship is capable to participate in warfighting, peacekeeping and humanitarian operations simultaneously.²²⁶ Similarly, Spain has procured the *Juan Carlos I*, a 27,075-tonne vessel capable of supporting amphibious assault, air warfare, sea control, military lift, air assault, and humanitarian operations.²²⁷ India operates a 17,000-tonne Indian Navy Ship (INS) *Jalahwa*, a former US Navy (USN) Austin-class LPD that was refitted and upgraded.²²⁸ Lastly, the Royal New Zealand Navy operates the HMNZS *Canterbury* 9144-tonne multirole vessel which incorporates a roll-on/roll-off design to perform a host of operations includes humanitarian, peace-support and warfighting mission.²²⁹

The Netherlands' recent acquisition of *Karel Doorman* JSS is an interesting concept, most notably that this platform is designed to provide replenishment at sea, sealift, and sea

²²⁵ Jane's Sentinel Security Assessment – Western Europe, “Netherlands – Navy,” last modified 23 March 2020, <https://janes.ihs.com/Janes/Display/JWNA0110-WEUR>; Naval technology, “Rotterdam Class Landing Platform Dock (LPD),” (n.d.), <https://www.naval-technology.com/projects/rotterdam/>; Military Factory, “JS Osumi (LST-4001): Landing Ship Tank (LST) / Dock Landing Ship (LSD),” last modified 8 August 2018, https://www.militaryfactory.com/ships/detail.asp?ship_id=js-osumi-landing-ship-tank-japan; Naval Technology, “Endurance Class Landing Ship Tank (LST),” (n.d.), <https://www.naval-technology.com/projects/endurance-class-landing-ship-tank-lst/>; Jane's World Navies, “Korea, South – Navy,” last modified 19 March 2020, <https://janes.ihs.com/Janes/Display/JWNA0083-JWNA>; Naval technology, “Albion Class LPD (R) Landing Platform Dock,” (n.d.), <https://www.naval-technology.com/projects/lpd/>; Australian Navy, “HMAS *Choules*,” (n.d.), <https://www.navy.gov.au/hmas-choules>; Australian Navy, “Amphibious Assault Ship (LHD),” (n.d.), <https://www.navy.gov.au/fleet/ships-boats-craft/lhd>.

²²⁶ Thomas Withington, “Navies from War to Relief,” *Armada International* 31, no. 5 (Oct, 2007): 15-16,18,20,22, <https://search.proquest.com/docview/197106821?accountid=9867>.

²²⁷ Jane's Sentinel Security Assessment – Western Europe, “Spain – Navy,” last modified 6 April 2020, <https://janes.ihs.com/Janes/Display/JWNA0139-WEUR>.

²²⁸ Kelvin Wong, Jane's International Defence Review, “Analysis: Asia-Pacific Navies Pursue Enhanced Amphibious Lift,” last modified 16 January 2015, <https://janes.ihs.com/Janes/Display/idr17305-idr-2015#>; Marier, “Ready to Help . . . ,” 8.

²²⁹ Withington, “Navies from War to Relief,” *Armada International* 31, no. 5 (Oct, 2007): 15-16,18,20,22.

basing for support of forces ashore. Secondary tasks are disaster relief, humanitarian aid, and non-combatant evacuation operations.²³⁰ The *Karel Doorman* is similar to what Canada had envisioned for its original JSS fleet. The ship, with her 1,917 lane meters, is capable of supporting 5,000 tonnes of heavy rolling armoured vehicles. It has a displacement capacity of 27,000 tonnes and can carry 1,000 cubic meters of aviation fuel, 7,700 cubic meters of diesel oil, and 400 cubic meters of freshwater.²³¹ The ship, with its multi-roles, deployed in March 2018 as part of Standing NATO Groups with a fully staffed Role-2 hospital and a Cougar helicopter. This was the first operational military deployment for the ship, which had previously only supported humanitarian aid missions.²³²

Similarly, the Dutch *Rotterdam*-class LPD amphibious warfare ship is designed to carry a fully equipped battalion, including combat and logistic support vehicles and supplies. The ships can also carry out a range of other roles such as command and control, sealift, sea basing, and humanitarian relief.²³³ The ship displaces about 12,750 tonnes and can carry up to 4 helicopters, and 6 landing crafts. The *Rotterdam*-class ship provides for cargo loading through her side vehicle loading ramps, and assist landing force commander with her robust communication system. The vessel can also accommodate, beside her relatively small crew of 124, a fully equipped marine battalion or up to 613 troops.²³⁴

²³⁰ Jane's Sentinel Security Assessment – Western Europe, “Netherlands – Navy.”

²³¹ *Ibid.*

²³² *Ibid.*

²³³ *Ibid.*

²³⁴ Naval technology, “Rotterdam Class Landing Platform Dock (LPD).”

Table 3.1 - Humanitarian Assistance Vessels in Other Navies

Nation	Vessel	Displacement	Cargo Capacity	Helicopters	Other Specifications
Netherlands	<i>Rotterdam</i> -class Landing Platform Dock	12,750 tonnes	170 armoured personnel carriers, or 33 main battle tanks 613 troops (excluding complement of 124 crew members)	Up to 4 helicopters or 6 Super Puma	Sealift capability Support to forces ashore Landing craft
Netherlands	<i>Karel Doorman</i> Joint Support Ship	27,000 tonnes	1,917 lane meters 1,000 cubic m aviation fuel 7,700 cubic m diesel oil 400 cubic m freshwater 5,000 t of heavy rolling armoured materiel 300 troops	Up to 6 medium lift helicopters	Replenishment at sea Sealift Sea basing for support of forces ashore
Japan	<i>Osumi</i> Landing Platform Dock	8,900 tonnes	2 vehicle decks 438 troops	Up to 8 helicopters	Sealift capability Landing craft
Singapore	<i>Endurance</i> Landing Platform Dock	6,000 tonnes	18 tanks/20 trucks and bulk cargo 350 troops	Up to 2 medium lift helicopters	Sealift capability Support to forces ashore Landing craft
South Korea	<i>Dokdo</i> Landing Platform Helicopter	18,800 tonnes	720 troops or up to 200 vehicles	Up to 10 helicopters	Sealift capability Support to forces ashore Landing craft
United Kingdom	<i>Albion</i> Landing Platform Dock	16,000 tonnes	30 armoured vehicles 300 assault troops or up to 650 for short emergency periods, together with their equipment and 70 support vehicles. 325 crew members	Up to 2 helicopters	Sealift capability Support to forces ashore Landing craft
Australia	<i>Adelaide</i> Landing Helicopter Dock	27,000 tonnes	1,350 lane meters 110 vehicles 1,000 troops	Up to 18 helicopters	Sealift capability Support to forces ashore Landing craft
Australia	<i>Choules</i> Landing Ship Dock	16,190 tonnes	1,150 lane meters 150 light trucks and 700 troops	Up to 2 medium lift helicopters	Sealift capability Support to forces ashore Landing craft

Sources: Various. See note.

In Japan, the *Osumi* LPD performs similar functions as the *Endurance* LPD in Singapore, although the *Osumi* also serves as a Tank Landing Ship (TLS). In essence, the *Osumi* does not "beach" its forces in the traditional sense, instead, its primary capability is to serve as an offshore dock of sorts and release vehicles and launch helicopters.²³⁵ Although this feature limits the tactical value of the vessel, the *Osumi* remains nonetheless a critical asset in the Japanese fleet. The *Osumi* displaces about 8,900 tonnes under standard loads and this balloons to 14,000 tons

²³⁵ Military Factory, "JS Osumi (LST-4001): Landing Ship Tank (LST) / Dock Landing Ship (LSD)."

under full combat loads.²³⁶ It has two vehicle decks, and can carry up to 8 helicopters. Like the *Rotterdam*-class LPD, the *Osumi* has a relatively small crew of 138, and can accommodate an infantry detachment of 300 troops. The vessel internal spaces can be reworked to provide medical care and sleeping quarters for humanitarian missions, as seen in 2011 after the northeast Pacific coast was struck with a 9.0-magnitude earthquake and tsunami, devastating the region.²³⁷ The *Osumi* provided HA in the region along with several destroyers, frigates, and landing ship utility vessels.

The *Endurance*-class LPD on the other hand, has been in service since 2000, and will soon be replaced by a Joint Multi Mission Ship (JMMS) platform, which is intended to enhance Singapore's ability to co-ordinate regional relief operations and work with international partners in times of humanitarian crises.²³⁸ The JMMS will have a greater lift capacity and will be designed to perform better as a command platform. The *Endurance* LPD, currently serving in the Singapore fleet, displaces about 6,000 tonnes and can carry up to 18 tanks, 20 vehicles and bulk cargo, as well as two medium lift helicopters.²³⁹ It is manned with four 13m fast craft equipment and utility (FCEU) and two 25m fast craft utility (FCU) vessels, and can provide transportation for 350 troops.²⁴⁰ The LPD has a sealift capability, although with the inception of the JMMS, the sealift of the new platform will be enhanced. The *Endurance* LPD missions include power projection through the transportation of land forces for military training and exercises, logistics support and command vessel when operating with the navy, search and rescue, and HA and

²³⁶ *Ibid.*

²³⁷ Jane's Sentinel Security Assessment - China and Northeast Asia, "Japan – Navy," last modified 31 March 2020, <https://janes.ihs.com/Janes/Display/JWNA0078-CNA>; Military Factory, "JS Osumi (LST-4001): Landing Ship Tank (LST) / Dock Landing Ship (LSD)."

²³⁸ Jane's Sentinel Security Assessment – Southeast Asia, "Singapore – Navy," last modified 15 April 2020, <https://janes.ihs.com/Janes/Display/JWNA0134-SEA>.

²³⁹ Naval Technology, "Endurance Class Landing Ship Tank (LST)."

²⁴⁰ *Ibid.*

disaster relief during peace time emergencies.²⁴¹ The *Endurance*'s deployment in Indonesia in 2004 to help in the relief effort after a tsunami struck the Aceh province, is such an example.

Parallel to the *Rotterdam*-class LPD, the *Dokdo* Landing Platform Helicopter (LPH) from South Korea, the *Albion* LPD from the UK, and the *Choules* LSD from Australia all have amphibious capabilities although, the latter three present greater sealift capacity due to their increase tonnage and ship design. For example, the *Dokdo* LPH has a displacement of 18,800 tonnes and can carry up to 10 helicopters, roughly 700 embarked troops, 10 main battle tanks and a mix of other military vehicles, and deploy up to 2 landing craft air cushions (LCACs) from its stern well-deck.²⁴² As for the *Albion* LPD, with a maximum displacement capacity of 16,000 tonnes, the ship can carry two helicopters or one Chinook, and 300 assault troops or up to 650 for short emergency periods, together with their equipment and 70 support vehicles.²⁴³ The ship is manned with a crew of 325 and has on board four landing craft, each of which can transport 35 people or two light trucks.²⁴⁴ The ship also has a roll-on, roll-off landing craft, and has an excellent command and control system for support to forces ashore. HMAS *Choules* for its part, is a highly operational 16,000 tonnes ship, and capable of carrying an overload of 700 troops, 23 tanks, 150 light trucks, 2 helicopters, 2 LCVP, and a LCM.²⁴⁵ *Choules* has the capability to transport personnel and equipment ashore using her airlift and sealift capabilities either from close to shore or from sea. This was demonstrated in January 2020 where both *Choules* and Landing Helicopter Docks (LHD) HMAS *Adelaide* deployed as part of Operation '*Bushfire Assist 19-20*' to assist in the evacuation of townspeople from coastal areas in the state of Victoria

²⁴¹ *Ibid.*

²⁴² Jane's World Navies, "Korea, South – Navy."

²⁴³ Naval technology, "Albion Class LPD (R) Landing Platform Dock."

²⁴⁴ *Ibid.*

²⁴⁵ Australian Navy, "HMAS *Choules*."

and New South Wales as citizens were trying to flee significant bushfires.²⁴⁶ This example shows that HMAS *Choules* is not only a highly integrated vessel, but as well a force multiplier for HA crisis.

HMAS *Adelaide*, who recently contributed to the relief efforts in Australia is the largest ship ever built for the Royal Australian Navy (RAN). This ship displaces 27,000 tonnes, and has 1,350 lane meters for cargo. She can land a force of over 1,000 personnel by helicopter and water craft, along with all their weapons, ammunition, vehicles and stores.²⁴⁷ She has a capacity for 110 vehicles, and up to 18 helicopters. She can accommodate 1,400 personnel, including the ship's company, and the flight deck crew. The ship provides for joint capability, including space for allied forces onboard to operate if necessary. She can also support humanitarian missions as depicted during Operation *'Bushfire Assist 19-20'*. The HMAS *Adelaide* is part of the Canberra-class LHD, which replaced the Newport and Tobruk-class in 2015. In East Timor in 1999, *Tobruk* transported cargo and troops from Australia, New Zealand, Canada and Ireland, and was vital to any realistic efforts to make land forces mobile. Amphibious vessels such as *Tobruk* and *Adelaide* prove essential to enable joint operations, and to respond to humanitarian crisis.

All the aforementioned navies and capabilities have one thing in common: they all invested in adequate resources to meet all contingencies, including those for HA. Canada's ambition to acquire such capability has been present throughout the years, but the determination has always falter to concretize. For example, in 1963, Paul Hellyer wanted to increase the army's capability to serve with the UN and as such sought the procurement of sealift capability through the navy, but when the navy proposed the procurement of two *Iwo Jima*-class LPHs, the plan

²⁴⁶ Jane's Sentinel Security Assessment – Oceania, “Australia – Navy,” last modified 19 April 2020, <https://janes.ihs.com/Janes/Display/JWNA0007-OCEA>.

²⁴⁷ Australian Navy, “Amphibious Assault Ship (LHD).”

faltered as it was deemed too expensive. Similarly, the design of the two new fleet support ships *Protecteur* and *Preserver* approved in 1965 included the provision for a modest sea-lift capability for a maximum of about 200 vehicles and almost 500 tons of stores, however, as the load capacity was creating an impediment for the AORs' primary task of supporting the fleet, the modest sealift capability was abandoned.²⁴⁸ With the new JSS configuration in the RCN, it seems that the past continues to repeat itself. Therefore, Canada must invest in amphibious capabilities or a platform similar thereof, of which several countries have already invested in, otherwise Canada will continue to remain at the mercy of allies' substantial capability, and will keep lacking the sealift, support to forces ashore, and joint capability deemed crucial, and that not only for domestic and international operations with the US and NATO, but as well for international humanitarian crisis.

CHAPTER 4 - RECOMMENDATIONS AND CONCLUSION

RECOMMENDATIONS

As presented in this paper, there has been several proponents for the procurement of a RCN vessel capable of providing sealift, and support to forces ashore, and that not only for the support of HA missions, but as well for a multitude of other operations at home and abroad. Although recently, the CFDS fleet option was selected for the procurement of six AOPS, 2 JSS, and 15 CSC ships. This fleet selection left not only a reduced sealift capability for the navy, but as well a void in the capability to support forces ashore.

Currently, Canada's defence budget has no margin for the construction of a ship commensurate to HA and neither for an amphibious capability capable of meeting tomorrow's

²⁴⁸ Amphion, Mount Olympus, "Military Sea-Lift," *Maritime Affairs*, (Fall 1999): 3.

requirement. Although, some possibilities currently exist. For example, the acquisition of an existing platforms for its conversion into a multi-roles support ship would be much cheaper for Canada to acquire than building this new capability. In 2015, the quick conversion of Marchant Vessel (MV) *Asterix* into an iAOR provided Canada with a crucial at sea refuelling capability, and at a cost at \$587 million, this platform responded to Canada's most needed requirement. The iAOR contract truly exemplifies the rapidity with which Canada is able to fill capability gap in crucial time. This was not the first time that Canada purchased a vessel to fill a gap. In 1998, the Mulroney's government acquired two oil rig support vessels, *Jean Tide* and *Joice Tide*, and started their conversion into minesweepers capability.²⁴⁹ The latter two examples demonstrate that the feasibility of acquiring an existing capability for its transformation to complete the Government of Canada's naval requirement is possible. Some thoughts should be provided now for the acquisition of such vessels to provide Canada with the crucial sealift and support to joint forces ashore so often addressed, but never realized after the paying off of HMCS *Bonaventure*. The requirement has consistently been present. The conversion of such vessels is an affordable solution that Canada should envisage.

Another solution, and as previously seen with the *Karel Doorman* JSS, a fully integrated platform is totally possible. The only ingredient required is a willingness from the Canadian government to procure this joint capability through the conversion of a platform. For instance, the conversion of a one-or-more commercial roll-on/roll-off vessels into a Maritime Support Ship (MSS), capable of providing HA to those in needs around the world, and of refuelling other

²⁴⁹ RCN News. Canadian Navy of Yesterday, Today and Tomorrow, "Ex-HMCS *Anticosti* in the News," last modified 20 May 2013, <https://web.archive.org/web/20160509070909/http://rcnnewsmagazine.blogspot.ca/2013/05/ex-hmcs-anticosti-in-news.html>.

warships at sea, thus providing the iAOR and JSS a backup for when they are unavailable, is a possible solution for Canada.²⁵⁰ Another solution would be the conversion of another *Asterix*, but as an RCN Hospital Ship/Disaster Relief vessel.²⁵¹ The last option would be the purchase, beside converting another *Asterix*, of the current iAOR to provide Canada with the minimal risk of not being able to meet all of its requirements on operations. As seen previously, the study realized in the 2007-2008 time frame, demonstrated that for fleet optimization, there was little impact of having four over three JSS, but a significant decline in responsiveness was found in having only two rather than three JSS.²⁵² Therefore, to minimize the political risk, and to be capable of responding to a myriad of operations concurrently, including the procurement of HA, a solution must soon be adopted for the investment in a (or more) multi-roles vessel to provide for concurrent operations, and that both at home and abroad.

CONCLUSION

There are several things which are unpredictable in the world as demonstrated in 1990 with the end of the Cold War, the uniting of East and West Germany, and the dissolution of the Soviet Union. The attack on the World Trade Centre on 11 September 2000 was also unpredictable, although it made government think about unification and joint capability requirement for operations, though Canada is still not joint. In fact, Canada is one of the wealthiest country without a multi-roles capability for deployment at sea. Although the end of the Cold War and the attack on US soil were incalculable, one thing remains certain, climate

²⁵⁰ John Pike, "Maritime Support Ship / GMAS: Global Maritime Arctic Support Ship," *Global Security*, (n.d.), <https://www.globalsecurity.org/military/world/canada/hmcs-mss.htm>; Marier, "Ready to Help Through Peace-Support Ships" . . . , 11.

²⁵¹ Martin Shadwick, "Maritime Futures Revisited," *Canadian Military Journal*, last modified 2 December 2016, <http://www.journal.forces.gc.ca/Vol17/no1/page79-eng.asp>.

²⁵² Bourque, and Cheryl Eisler, "Fleet Mix Study Iteration II . . . , 3. In the study, the JSS were treated as having the same capability as the current AOR since it was assumed that merchant ships would be available to provide the sealift required to bring equipment into theater.

change is. As previously discussed in this paper, in the past three decades, the amount of natural disasters from floods, drought, extreme weather, and earthquakes have more than double worldwide. The highest record reported was in 2005 with 432 disasters.²⁵³ Climate change is real and several navies have already underscored a pressing need to acquire multi-roles vessels, specifically to meet the unique demands of HA operations. In order to meet such operations in the next decade and beyond, Canada's investment in such capability must be realized.

There have been several aspirations since 1965 for the acquisition of such multi-roles ship, but all have faltered. In 1965, the design of the two new fleet support ships *Protecteur* and *Preserver* included the provision for a modest sealift capability however, as the load capacity was creating an impediment for the AORs' primary task of supporting the fleet, the modest sealift capability was abandoned.²⁵⁴ Similarly in 2008, as the cost of material and labour were becoming more expensive, the three JSS, which were supposed to address the very limited capacity to provide logistic support and to operate as a force multiplier in a joint environment, were also downsized, and that not only in numbers, but also in capability. In 2025, when the last JSS is commissioned, not only Canada will continue to have a limited sealift capability, but as well a lack of capability commensurate to the delivery of HA in time of crisis. Therefore, pursuing the use of a JSS to deliver HA will not only perpetuate the need for support from other navies with amphibious capabilities, but as well the need to rely on merchant vessels for sealift transportation into theatre of operations.

²⁵³ Hannah Ritchie, and Max Roser, "Natural Disasters: Empirical View," *Our World in Data*, (2019), <https://ourworldindata.org/natural-disasters>; V. Marier, "Ready to Help Through Peace-Support Ships" (Component Capabilities Course Paper, Canadian Forces College, 2019), 4.

²⁵⁴ Amphion, Mount Olympus, "Military Sea-Lift," *Maritime Affairs*, (Fall 1999): 3.

Besides their limited capability, using a JSS in support of HA operations has also several other drawbacks. First, when a JSS is used on missions for HA relief, not only it precludes the fleet at sea from sustainment, but it adds onto deployment costs as the RCN warships have to either replenish from other navies or go to port, which adds time and costs as port visits are expensive. Second, providing a JSS for HA operations provides a lack of training for the fleet at sea since that while a JSS is deployed on HA operations, the training capability for fuelling at sea from both the JSS and other RCN ships' perspectives is reduced. Lastly, since the fleet at sea depends on the JSS to remain at sea for an extended period of time for fuel, food, spare parts, and other various commodities, using a JSS for HA missions impedes this sustainment and as such, the efficiency of the fleet. Therefore, while there is a significant propensity to rapidly deploy an JSS for HA to help those in needs, this asset may not be the most judicious asset to send to theatre. As such, the procurement of a capability, a multi-roles vessel, for these types of operations is a judicious choice to make.

Similarly, using frigates and the upcoming CSC ships to assist in the delivery of HA may not be the most judicious platforms to utilize even if frigates have often been used in the past to fill this function. These warships are meant to provide for the defence of Canada at home and abroad. They are not suited to provide HA relief. This was demonstrated notably in the US during *Operation Tempest* where the *Sea Kings* provided the heavy lifting during the relief efforts as the frigates lacked the capability to deliver from ship to shore. The fact that frigates and CSC are ill suited for the delivery of HA, re-enforces the need for a multi-roles ship to provide HA in times of crisis.

The world is unpredictable and climate change is real, therefore investing now in a capability designed for the delivery of HA is required. Several options have been recommended

such as the conversion of a commercial vessel into a Ro-Ro vessel, or the conversion of another *Asterix*, and/or the purchase of the current iAOR. All of these recommendations are viable options, and in a period of financial restraint, they are feasible since they require low investment. Often times in the past Canada did not procure the right capability to conduct missions such as using the ill-suited Oberon-class submarines and the inadequate hull-mounted sonar systems for the tracking and the deterrence of Soviet nuclear submarines. This time, and once and for all, could Canada acquire the right capability for the delivery of HA? And how about the long-time contemplated idea of a multi-roles vessel? Now is the right time to invest in this platform.

BIBLIOGRAPHY

- Abd-el Monsef, Hesham, Scot E. Smith, and Kamal Darwish. "Impacts of the Aswan High Dam After 50 Years." *Water Resources Management* 29, no. 6 (04, 2015): 1875.
doi:<http://dx.doi.org/10.1007/s11269-015-0916-z>.
<https://search.proquest.com/docview/1660323569?accountid=9867>.
- Amphion, Mount Olympus. "Military Sea-Lift." *Maritime Affairs*. (Fall 1999): 3.
- Annis, Roger. Exaggerated Claims: Assessing the Canadian Military's Haiti Earthquake Response. *The Canada-Haiti Information Project: Haiti Liberte*, Vol 3, no. 12. 6 October 2010. <https://canada-haiti.ca/content/exaggerated-claims-assessing-canadian-militarys-haiti-earthquake-response>.
- Australian Navy. "Amphibious Assault Ship (LHD)." (n.d.).
<https://www.navy.gov.au/fleet/ships-boats-craft/lhd>.
- Australian Navy. "HMAS *Choules*." (n.d.). <https://www.navy.gov.au/hmas-choules>.
- Bagley, F. R. C. "Egypt Under Nasser." *International Journal* 11, no. 3 (Summer, 1956): 201.
<https://search.proquest.com/docview/1290394166?accountid=9867>.
- Beatty, Perrin and Canada. Department of National Defence. *Challenge and Commitment: A Defence Policy for Canada: A Synopsis of the Defence White Paper*. Ottawa: Minister of Supply and Services Canada, 1987.
- Blanchette, Arthur E. *Canadian Foreign Policy, 1945-2000: Major Documents and Speeches*. Toronto: Golden Dog Press, 2014.
- Bland, Douglas L. *Canada's National Defence, Volume 1: Defence Policy*. Kingston: School of Policy Studies, Queen's University, 1997.
- Bourque, Alex, and Cheryl Eisler. "Fleet Mix Study Iteration II: Making the Case for the Capacity of the "Navy After Next"." *Defence R&D Canada: Centre for Operational Research and Analysis*. Ottawa, ON: Defence Research and Development Canada, 2010.
- Burton, Robert M.H., and Paul L. Massel. "Afloat Logistics and Sealift Capability, Volume I: Simulation-Based Fleet Sizing. *Operational Research Division*, Ottawa, ON: Department of National Defence, 2001.
- Byers, Michael. *Intent for a Nation: What is Canada for?: A Relentlessly Optimistic Manifesto for Canada's Role in the World*. Vancouver: Douglas & McIntyre, 2008.

- Canada. Chief of the Maritime Staff and Canada Canadian Armed Forces Maritime Command. *Leadmark: The Navy's Strategy for 2020: A Summary*. Ottawa: Directorate of Maritime Strategy, 2001.
- Canada. Department of National Defence. "Algeria 1980." Last modified 18 July 2019. <https://www.canada.ca/en/department-national-defence/services/military-history/history-heritage/past-operations/africa/algeria-1980.html>.
- Canada. Department of National Defence. *Defence 1959*. Ottawa: Queen's Printer and Controller of Stationary, 1959.
- Canada. Department of National Defence. *Defence 1971*. Québec: Supply and Services Canada, 1972.
- Canada. Department of National Defence. *Defence 1977*. Québec: Supply and Services Canada, 1978.
- Canada. Department of National Defence. "Disaster Assistance Response Team (DART) Deployments." Last modified 9 October 2018. <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/types/dart/deployments.html>.
- Canada. Department of National Defence and Canada. Ministère de la défense nationale. *Canada First Defence Strategy*. Ottawa, Ont.: National Defence, 2008.
- Canada. Department of National Defence and Canada. Ministère de la défense nationale. *Strong, Secure, Engaged: Canada's Defence Policy*. Ottawa, Ont.: National Defence = Défense nationale, 2017.
- Canada. Department of National Defence, and Canada. Ministère de la défense nationale. *Canadian Defence Policy*. Ottawa: Department of National Defence, 1992.
- Canada. Department of National Defence, and Canada. Ministère de la défense nationale. *Canada's International Policy Statement: A Role of Pride and Influence in the World*. Ottawa: Government of Canada, 2005.
- Canada. *Estimates 1989-1990: Part III*. Ottawa: Minister of Supply and Services, 1989.
- Canada. *Estimates 1991-1992: Part III*. Ottawa: Minister of Supply and Services, 1991.
- Canada. *Estimates 1994-1995: Part III*. Ottawa: Minister of Supply and Services, 1994.
- Canada. *Estimates 1997-1998: Part III*. Ottawa: Minister of Supply and Services, 1997.
- Canada. *Estimates 1998-1999: Part III*. Ottawa: Minister of Supply and Services, 1998.
- Canada. *Estimates 1999-2000: Part III*. Ottawa: Minister of Supply and Services, 1999.

- Canada. *Estimates 2004-2005: Part III*. Ottawa: Minister of Supply and Services, 2004.
- Canada. *Estimates 2005-2006: Part III*. Ottawa: Minister of Supply and Services, 2005.
- Canada. *Estimates 2006-2007: Part III*. Ottawa: Minister of Supply and Services, 2006.
- Canada. *Estimates 2007-2008: Part III*. Ottawa: Minister of Supply and Services, 2007.
- Canada. Government of Canada. “Emergency Relief Operations Conclude in New Zealand.” Last modified 6 July 2018. <http://www.rcmf-arc.forces.gc.ca/en/article-template-standard.page?doc=emergency-relief-operations-conclude-in-new-zealand/ivqxgs5y>.
- Canada. Government of Canada. “HMCS *Bonaventure*.” Last modified 2 August 2017. <https://www.canada.ca/en/navy/services/history/ships-histories/bonaventure.html>.
- Canada. Government of Canada. “International Force in East Timor (INTERFET).” Last modified 11 December 2018. <https://www.canada.ca/en/department-national-defence/services/military-history/history-heritage/past-operations/asia-pacific/toucan.html>.
- Canada. Government of Canada. “Operation Horatio.” Last modified 11 December 2018. <https://www.canada.ca/en/department-national-defence/services/military-history/history-heritage/past-operations/caribbean/horatio.html>.
- Canada. Government of Canada. “Operation Renaissance Irma Maria.” Last modified 18 December 2017. <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/recently-completed/operation-renaissance-irma-maria.html>.
- Canada. Government of Canada. “Operation Tempest.” Last modified 12 December 2018. <https://www.canada.ca/en/department-national-defence/services/military-history/history-heritage/past-operations/north-america/tempest.html>.
- Canada. Government of Canada. “Procurement.” Last modified 7 April 2020. <https://www.canada.ca/en/department-national-defence/corporate/reports-publications/proactive-disclosure/cow-estimates-a-2019-20/procurement.html#toc1>.
- Canada. House of Commons. Standing Committee on National Defence. *The Readiness of Canada’s Naval Forces*, no. 42, June 2017, 1:25-64.
- Canada. Ministère de la Défense nationale, Canada. Marine royale canadienne, Canada. Royal Canadian Navy, and Canada. Department. of National Defence. *Leadmark 2050: Canada in a New Maritime World*. Ottawa: National Defence, 2017.
- Canada. National Defence. Backgrounder: “Canadian Forces Disaster Assistance Response Team.” Last modified 3 February 2004.

[https://web.archive.org/web/20050117092435/http://www.forces.gc.ca/site/Newsroom/vi
ew_news_e.asp?id=301](https://web.archive.org/web/20050117092435/http://www.forces.gc.ca/site/Newsroom/vi
ew_news_e.asp?id=301).

Canada. National Defence. “Backgrounder: Canadian Forces Support to Relief Efforts in Southern United States.” Last modified 16 September 2005.

[https://web.archive.org/web/20070214055302/http://www.forces.gc.ca/site/newsroom/vie
w_news_e.asp?id=1739](https://web.archive.org/web/20070214055302/http://www.forces.gc.ca/site/newsroom/vie
w_news_e.asp?id=1739).

Canada. Office of the Parliament Budget Officer. *Feasibility of Budget for Acquisition of Two Joint Support Ships*. Ottawa: Canada, 2013.

Canada. Task Force – Operation Oil. *Report of the Task Force – Operation Oil (Cleanup of the Arrow Oil Spill in Chedabucto Bay) to the Minister of Transport, Volume One*. Ottawa: Information Canada, 1970.

Canada. Treasury Board of Canada Secretariat. “Section II: Analysis of Program Activities by Strategic Outcomes 2008-2009.” Last modified 5 November 2009. <https://www.tbs-sct.gc.ca/dpr-rmr/2008-2009/inst/dnd/dnd02-eng.asp>.

Canadian International Development Agency (CIDA). “CIDA’s Policy for Environmental Sustainability.” Last accessed 24 March 2020.

http://publications.gc.ca/collections/collection_2013/acdi-cida/E94-29-9-1-eng.pdf.

Canadian International Development Agency (CIDA). “Statistical Report for International Development Assistance, Fiscal Year 2001–2002.” Last accessed 24 March 2020.

http://publications.gc.ca/collections/collection_2011/acdi-cida/CD2-4-2002-eng.pdf.

Canadian Naval Review. “JSS adrift in a Strategic Black Hole*.” Last modified 23 September 2011. <https://www.navalreview.ca/2011/09/jss-adrift-in-a-strategic-black-hole/>.

Canadian Naval Review. “Volumetrics and Strategic Effect.” Last modified 16 February 2010. <https://www.navalreview.ca/2010/02/volumetrics-and-strategic-effect/>.

Canadian Tribal Association – Iroquois II. “HMCS Iroquois DDH 280.” Last modified 20 September 2007. <http://jproc.ca/cta/iroq2.html>.

Collenette, David, Canada. Department of National Defence, and Canada. Ministère de la défense nationale. *1994 Defence White Paper*. Ottawa: Department of National Defence, 1994.

Cowan, Christopher. “A New ‘Big Honking Ship’: Why Canada Should Procure an Amphibious Assault Ship (Part I/V).” *The NATO Association of Canada*, 26 July 2014.

<http://natoassociation.ca/a-new-big-honking-ship-why-canada-should-procure-an-amphibious-assault-ship-part-iv/>.

- Crowcroft, Barnaby. "Egypt's Other Nationalists and the Suez Crisis of 1956." *The Historical Journal* 59, no. 1 (03, 2016): 255. doi:<http://dx.doi.org/10.1017/S0018246X15000060>.
- CTV News. "Canada to send 1,000 soldiers to Haiti." Last modified 19 May 2012. <https://www.ctvnews.ca/canada-to-send-1-000-soldiers-to-haiti-1.473802>.
- Debates of the Senate. *Official Report (Hansard)*. 1st session, 36th Parliament, Vol 137, no. 77. Ottawa: Public Works and Government Services Canada, 1998.
- Dickens, David. "The United Nations in East Timor: Intervention at the Military Operational Level." *Contemporary Southeast Asia* 23, no. 2 (08, 2001): 213-232. doi:<http://dx.doi.org/10.1355/CS23-2B>. <https://search.proquest.com/docview/205216586?accountid=9867>.
- Donaghy, Greg and David Webster. *A Samaritan State Revisited: Historical Perspectives on Canadian Foreign Aid*. Vol. no. 10; no. 10. Calgary, Alta: University of Calgary Press, 2019.
- Eayrs, James. "Canadian Policy and Opinion during the Suez Crisis." *International Journal* 12, no. 2 (Spring, 1957): 100. <https://search.proquest.com/docview/1290325934?accountid=9867>.
- Gendron, R. S. Canada's University: Father Levesque, Canadian aid, and the National University of Rwanda. *Historical Studies*, 73 (2007): 74.
- German, Tony. *The Sea Is at Our Gates: The History of the Canadian Navy*. McClelland & Stewart: Toronto, 1990.
- Girouard R. Captain (N). "Op Toucan." *Maritime Affairs*. (Fall 2000): 28.
- GlobalSecurity.org. "St. Laurent / Restigouche / Mackenzie Destroyer Escorts (DDE)." Last modified 11 July 2011. <https://www.globalsecurity.org/military/world/canada/hmcs-st-laurent.htm>.
- Goldie, Janis L. *Morals, Process and Political Scandals: The Discursive Role of the Commission in the Somalia Affair in Canada*. Calgary, AB: University of Calgary, 2009.
- Goodspeed, D. J. *The Armed Forces of Canada, 1867-1967: A Century of Achievement*. Ottawa: Directorate of History, Canadian Forces Headquarters, 1967.
- Granatstein, J.L., and Robert Bothwell. *Pirouette: Pierre Trudeau and Canadian Foreign Policy*. Toronto: University of Toronto Press, 1990.
- Hartfiel, Robert Michael. "Planning without Guidance: Canadian Defence Policy and Planning, 1993–2004." *Canadian Public Administration* 53, no. 3 (2010): 327.

- Haydon, Peter T. and Dalhousie University. Centre for Foreign Policy Studies. *Sea Power and Maritime Strategy in the 21st Century: A Medium Power Perspective*. Vol. no. 10. Halifax, N.S: Centre for Foreign Policy Studies, Dalhousie University, 2000.
- Hellyer, Paul and Canada. Department of National Defence. *White Paper on Defence*. Ottawa: R. Duhamel, 1964.
- Hennessy, Michael Alphonsus. "The Rise and Fall of a Canadian Maritime Policy, 1939-1965: A Study of Industry, Navalism and the State." Order No. NQ38348, University of New Brunswick (Canada), 1995.
<https://search.proquest.com/docview/304221000?accountid=9867>.
- Higgins, Laura J. and Dalhousie University. Centre for Foreign Policy Studies. *Canadian Naval Operations in the 1990s: Selected Case Studies*. Vol. no. 12. Halifax, N.S: Centre for Foreign Policy Studies, Dalhousie University, 2002.
- Hobson, Sharon. "Evergreen Sea King." *Canadian Defence Quarterly* 27, no. 3 (Spring, 1998): 32. <https://search.proquest.com/docview/197161149?accountid=9867>.
- Hulbert, Jeff. "Right-Wing Propaganda Or Reporting History? - the Newsreels and the Suez Crisis of 1956." *Film History* 14, no. 3 (2002): 263.
<https://search.proquest.com/docview/219825070?accountid=9867>.
- Institute for Strategic Studies. "The Military Balance." (1971).
- Jane's Air-Launched Weapons. "Mk 44 Lightweight Torpedo." Last modified 15 January 2006.
<https://janes.ihs.com/Janes/Display/jalw3117-jalw>.
- Jane's Defence Weekly. "Country Survey: Canada." Last modified 3 October 1992.
<https://janes.ihs.com/Janes/Display/jdw02061-jdw-1992>.
- Jane's International Defense Review. "UK Naval Shipbuilding Slow Boat to Contraction." Last modified 1 December 1992. <https://janes.ihs.com/Janes/Display/idr01336-idr-1992>.
- Jane's Sentinel Security Assessment - China and Northeast Asia. "Japan – Navy." Last modified 31 March 2020. <https://janes.ihs.com/Janes/Display/JWNA0078-CNA>.
- Jane's Sentinel Security Assessment – Oceania. "Australia – Navy." Last modified 19 April 2020. <https://janes.ihs.com/Janes/Display/JWNA0007-OCEA>.
- Jane's Sentinel Security Assessment – Southeast Asia. "Singapore – Navy." Last modified 15 April 2020. <https://janes.ihs.com/Janes/Display/JWNA0134-SEA>.
- Jane's Sentinel Security Assessment – Western Europe. "Spain – Navy." Last modified 6 April 2020. <https://janes.ihs.com/Janes/Display/JWNA0139-WEUR>.

- Jane's Sentinel Security Assessment – Western Europe. “Netherlands – Navy.” Last modified 23 March 2020. <https://janes.ihs.com/Janes/Display/JWNA0110-WEUR>.
- Jane's World Navies. “Korea, South – Navy.” Last modified 19 March 2020. <https://janes.ihs.com/Janes/Display/JWNA0083-JWNA>.
- Kronenberg, Vernon J. *All Together Now: The Organization of the Department of National Defence in Canada 1964-1972*. Vol. 3/1973. Toronto: Canadian Institute of International Affairs, 1973.
- Lansford, Tom. *Fostering Community Resilience: Homeland Security and Hurricane Katrina*. Burlington, VT: Ashgate, 2013.
- Longard, John R. and Defence Research Establishment Atlantic. *Knots, Volts and Decibels: An Informal History of the Naval Research Establishment, 1940-1967*. Dartmouth: Defence Research Establishment Atlantic, 1993.
- Lund, Wilfred Gourlay Dolphin. “The Rise and Fall of the Royal Canadian Navy, 1945-1964: A Critical Study of the Senior Leadership, Policy and Manpower Management.” Last modified 1 December 2017. <https://dspace.library.uvic.ca/handle/1828/8828>.
- Macdonald, Donald S. and Canada. Dept. of National Defence. *White Paper on Defence*. Ottawa: Information Canada, 1971.
- Mackenzie, Hector. "Sinews of War and Peace: The Politics of Economic Aid to Britain, 1939-1945." *International Journal* 54, no. 4 (Fall, 1999): 655. <https://search.proquest.com/docview/220845683?accountid=9867>.
- “Maggie Delivers Peacekeepers to the Suez Canal.” *Legion Canada's Military History Magazine*. Last accessed 11 January 2019. <https://legionmagazine.com/en/2019/01/maggie-delivers-peacekeepers-to-the-suez-canal/>.
- Marier, V. “Ready to Help Through Peace-Support Ships.” Component Capabilities Course Paper, Canadian Forces College, 2019.
- McCoy, Kevin, and Tom Tulloch, “Why Canada Needs a Humanitarian Assistance and Disaster Relief Ship.” *Canadian Naval Review* 13, no. 1 (2017): 5-6.
- Medhora, Rohinton and Yiagadeesen Samy. *Canada-Africa Relations: Looking Back, Looking Ahead*. Waterloo Ontario]: CIGI, 2016. <http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=1409644&site=ehost-live&scope=site>.
- Military Factory. “JS Osumi (LST-4001): Landing Ship Tank (LST) / Dock Landing Ship (LSD).” Last modified 8 August 2018.

- https://www.militaryfactory.com/ships/detail.asp?ship_id=js-osumi-landing-ship-tank-japan.
- Milner, Marc, EBSCOhost (Online service), and EBSCO ebook. *Canada's Navy: The First Century*. 2nd ed. Toronto; Buffalo, NY: University of Toronto Press, 2009.
http://web.b.ebscohost.com/ehost/ebookviewer/ebook/bmxlYmtfXzQ2Nzk2NF9fQU41?s_id=d77a886b-a88e-4af9-b7b1-087bfb2c1f9b@pdc-v-sessmgr05&vid=0&format=EB&rid=1.
- Morris McDougall Staff Correspondent of The Christian Science Monitor. "Canada's Mutual Aid Exports to United Nations \$912 Million: French Aid Not shown Other Contributions." *The Christian Science Monitor (1908-Current File)*, Jun 15, 1944.
<https://search.proquest.com/docview/514412022?accountid=9867>.
- Morrison, David R. and North-South Institute (Ottawa, Ontario). *Aid and Ebb Tide: A History of CIDA and Canadian Development Assistance*. Waterloo, Ontario: Wilfrid Laurier University Press in association with the North-South Institute = L'Institut Nord-Sud, 1997.
- Naval technology. "Albion Class LPD (R) Landing Platform Dock." (n.d.). <https://www.naval-technology.com/projects/lpd/>.
- Naval Technology. "Endurance Class Landing Ship Tank (LST)." (n.d.). <https://www.naval-technology.com/projects/endurance-class-landing-ship-tank-lst/>.
- Naval technology. "Resolve Class Auxiliary Oiler Replenishment (AOR) Vessel." (n.d.).
<https://www.naval-technology.com/projects/resolve-class-auxiliary-oiler-replenishment-aor-vessel/>.
- Naval technology. "Rotterdam Class Landing Platform Dock (LPD)." (n.d.). <https://www.naval-technology.com/projects/rotterdam/>.
- North Atlantic Treaty Organization. "The North Atlantic Treaty: Washington D.C. – 4 April 1949." Last modified 10 April 2019.
https://www.nato.int/cps/en/natolive/official_texts_17120.htm.
- "Notes and Comments. The Suez Canal Crisis." *The Political Quarterly* 27, no. 4 (1956): 364.
<https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1467-923X.1956.tb01351.x>
- "Operation Unison: [Final Edition]." *Examiner*, Sep 07, 2005.
<https://search.proquest.com/docview/352698869?accountid=9867>.
- Pike, John. "Maritime Support Ship / GMAS: Global Maritime Arctic Support Ship." *Global Security*, (n.d.). <https://www.globalsecurity.org/military/world/canada/hmcs-mss.htm>.

- "Press Release: Sikorsky Delivers Six CH-148 Cyclone Helicopters to Canada." *Dow Jones Institutional News*, Jun 19, 2015.
<https://search.proquest.com/docview/2065249276?accountid=9867>.
- Pugliese, David. "Canadian Supply Ship in the Pacific but not Being Used in Tsunami Relief Efforts." *Ottawa Citizen*, 4 October 2018.
<https://ottawacitizen.com/news/national/defence-watch/canadian-supply-ship-in-the-pacific-but-not-being-used-in-tsunami-relief-efforts/>.
- ReliefWeb. ACT Appeal Haiti: Emergency Response to Hurricanes Fay, Gustav, Hanna and Ike - LAHT81, Revision 1. Last modified 15 October 2009.
<https://reliefweb.int/report/haiti/act-appeal-haiti-emergency-response-hurricanes-fay-gustav-hanna-and-ike-laht81-revision>.
- ReliefWeb, *Haiti: Earthquakes - Jan 2010*, (n.d.), <https://reliefweb.int/disaster/eq-2010-000009-hti>.
- RCN News. Canadian Navy of Yesterday, Today and Tomorrow. "Ex-HMCS *Anticosti* in the News." Last modified 20 May 2013.
<https://web.archive.org/web/20160509070909/http://rcnnewsmagazine.blogspot.ca/2013/05/ex-hmcs-anticosti-in-news.html>.
- Ritchie, Hannah, and Max Roser. "Natural Disasters: Empirical View," *Our World in Data*, (2019). <https://ourworldindata.org/natural-disasters>.
- Rowat, Donald C. "Canada's Royal Commission on Government Organization." *Public Administration* 41, no. 2 (1963): 193-197.
- Rubin, David. "Operation Unison-Canada's Help with Katrina - 2005." *Debt* 3 24, no. 6 (Nov, 2009): 20. <https://search.proquest.com/docview/214630476?accountid=9867>.
- Scanlon, Joseph. "Help from the Deep: The Potential of Ocean-Based Response to Disaster." *Disaster Prevention and Management* 5, no. 3 (1996): 16-23.
doi:<http://dx.doi.org/10.1108/09653569610121204>.
<https://search.proquest.com/docview/214376374?accountid=9867>.
- Scanlon, Joseph, Elizabeth Steele, and Alex Hunsberger. "By Air, Land, and Sea: Canada Responds to Hurricane Katrina." *Canadian Military Journal* 12, no. 3 (Summer 2012): 56.
- Shadwick, Martin. "Maritime Futures Revisited." *Canadian Military Journal*. Last modified 2 December 2016. <http://www.journal.forces.gc.ca/Vol17/no1/page79-eng.asp>.

- Silversides, Anne. "Lessons Canada Learned in Swissair Crash Being Applied in New York: CMAJ CMAJ." *Canadian Medical Association Journal* 165, no. 9 (Oct 30, 2001): 1243. <https://search.proquest.com/docview/204808673?accountid=9867>.
- Spicer, Keith. *A Samaritan State? External Aid in Canada's Foreign Policy*. University of Toronto Press, 1966.
- Sutherland, R. J. "Canada's Long Term Strategic Situation." *International Journal* 17, no. 3 (September 1962): 216–223. doi:[10.1177/002070206201700301](https://doi.org/10.1177/002070206201700301).
- Stevens, David. *Sea Power Centre - Australia, Strength Through Diversity: The Combined Naval Role in Operation Stabilise*. Canberra, Australia: Sea Power Centre – Australia, 2007.
- Sub-Lieutenant T.M. Wiggins. "Minor War Vessel Involvement with Operation Persistence." *Maritime Affairs*. (Fall 1998): 5.
- Szeto, Ray, Barry Cooper, and Fraser Institute, *The Need for Canadian Strategic Lift*. Vol. no. 5. Vancouver: Fraser Institute, 2005.
- Tijerina, Stefano. "Canadian Official Development Aid to Latin America: The Struggle Over the Humanitarian Agenda, 1963–1977." *Journal of Canadian Studies/Revue D'Études Canadiennes* 51, no. 1 (2017): 229.
- The Crowsnest. *The Royal Canadian Navy's Magazine* 15, no. 8 (August, 1963): 10. <http://www.readyayeready.com/crowsnest/issue.php?year=63&month=08>.
- The Crowsnest. *The Royal Canadian Navy's Magazine* 15, no. 12 (December, 1963): 7. <http://www.readyayeready.com/crowsnest/issue.php?year=63&month=12>.
- The Maritime Executive. Keel Laid for Royal Canadian Navy's Future Joint Support Ship. Last modified 16 April 2020. <https://www.maritime-executive.com/article/keel-laid-for-royal-canadian-navy-s-future-joint-support-ship>.
- United States. Committee on Government Reform. *Looking a Gift Horse in The Mouth: A Post-Katrina Review of International Disaster Assistance*. Washington, DC: U.S. Government Printing Office, April 6, 2006.
- Warburg, James P. "How Useful Is NATO?" *The Annals of the American Academy of Political and Social Science* 330, no. 1 (July 1960): 133. doi:[10.1177/000271626033000129](https://doi.org/10.1177/000271626033000129).
- Withington, Thomas. "Navies from War to Relief." *Armada International* 31, no. 5 (Oct, 2007): 15-16,18,20,22. <https://search.proquest.com/docview/197106821?accountid=9867>.
- Wong, Kelvin, Jane's International Defence Review. "Analysis: Asia-Pacific Navies Pursue Enhanced Amphibious Lift." Last modified 16 January 2015. <https://janes.ihs.com/Janes/Display/idr17305-idr-2015#>.