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## **A DEARTH OF MARITIME ASSETS FOR DISASTER RELIEF: A STRATEGIC VULNERABILITY**

**LCdr Ryan Bell**

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LCdr Ryan Bell

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# A DEARTH OF MARITIME ASSETS FOR DISASTER RELIEF: A STRATEGIC VULNERABILITY

## AIM

1. The release of Strong, Secure, and Engaged: Canada's Defence Policy (SSE), in June 2017, reiterated the Government of Canada's (GC) belief that the Canadian Armed Forces (CAF) should be a globally engaged and responsive organization beyond Canada's borders. Among the core tasks found within this document is the requirement for the CAF to be able to provide assistance to government agencies and non-governmental organizations in responding to international and domestic emergencies, as well as the evacuation of Canadian citizens abroad during international emergencies.<sup>1</sup> The fulfilment of this mandate requires a specific set of mobile and pre-prepared equipment and capabilities that are not currently in the CAF arsenal. This service paper will address several of the shortcomings identified during recent Humanitarian Assistance and Disaster Relief (HADR) deployments, and demonstrate how the capabilities found in Amphibious support ships could address these capability deficiencies. The lack of an amphibious transport capability within the Royal Canadian Navy (RCN) poses a strategic vulnerability that could potentially place the CAF in the position of not being able to meet one of its' government designated core mandates.

## INTRODUCTION

2. Despite being routinely called upon to provide assistance both domestically and internationally following natural disasters, and other large scale emergencies, the CAF, beyond the equipment used by the Disaster Assistance Response Team (DART), has never acquired purpose built assets to support this core mandate.<sup>2</sup> This has, in the past, resulted in the CAF utilizing military platforms during HADR operations that are poorly suited to the task, and require the GC to tailor its' response options to the assets available, versus to the humanitarian response that the disaster requires.<sup>3</sup> As a result, the CAF's ability to provide relevant, timely and responsive relief to disaster stricken nations has, during past operations, been hampered by the capabilities it is able to deploy, and the time needed to get those assets into theatre.<sup>4</sup>

3. The requirement for the CAF to provide support during humanitarian crises is not a new government mandate. Commencing with the 1994 White Paper on Defence, and

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<sup>1</sup> Department of National Defence, *Strong, Secure and Engaged: Canada's Defence Policy* (Ottawa: Department of National Defence, 2017), 17.

<sup>2</sup> McCoy, Kevin, and Tom Tulloch. "Why Canada needs a humanitarian assistance and disaster relief ship." *Canadian Naval Review* 13, no.1 (2017): 4.

<sup>3</sup> Warner Rosalind. "Resilience or Relief: Canada's response to global disasters". *Canadian Foreign Policy Journal* 19, no. 2 (2013): 232.

<sup>4</sup> Talbot, Max et al. "1<sup>st</sup> Canadian Field Hospital in Haiti: Surgical experience in earthquake relief." *Canadian Journal of Surgery* 55, no. 4 (2012): 272.

continuing through the next two successive defence policy papers: The Canada First Defence Strategy in 2008, and Strong, Secure and Engaged in 2017, the requirement for the CAF to be able to respond to national and international emergencies has consistently been one of its core mandates.<sup>5</sup> Additionally, over this same period, the frequency and scope of HADR deployments has steadily increased, with the number of humanitarian disasters each year now double what was normal in the early to mid-2000s.<sup>6</sup> To demonstrate this strategic vulnerability, which is based on the lack of a capability to effectively respond to maritime HADR operations, this service paper will show that the CAF's current maritime assets are unsuited for large scale HADR operations. The lack of a capability to transport needed mission specific materials, land them and support those materials as well as effective provision of immediate and lifesaving medical assistance to the affected communities, represent a vulnerability for the CAF. This represents a risk to the CAF by being seen to have failed in its government mandated mission to help respond to international emergencies.

## DISCUSSION

### Disaster Relief as a Maritime Task

4. Over 80 percent of the world's population lives in close proximity to an ocean, and as a result, a large percentage of the CAF's HADR deployments over the past fifteen years have been to coastal locations such as Haiti, New Zealand, New Orleans, Jamaica, and the Turks and Caicos.<sup>7</sup> As is the case for conventional deployments, during natural disasters, the CAF often finds itself deploying naval forces as the government's "First Responders" due to their relatively short notice to move, self-supporting nature and the flexibility in the spectrum of services that they can provide.<sup>8</sup> This makes naval assets ideal for rapid deployments where materiel support from the local economy is either scarce or non-existent.<sup>9</sup> Despite this, the current RCN fleet possess few capabilities that naturally lend themselves to undertaking these operations. *Halifax* class frigates, while versatile general purpose warships, are capable of carrying only a small amount of disaster relief supplies, possess no organic cargo landing capability, are capable of only limited helicopter support operations, and only possess self-supporting medical capabilities.<sup>10</sup> These limitations have been highlighted during recent HADR deployments, and point to significant deficiencies in the CAF's ability to provide timely and effective disaster relief based, on a lack of specific capabilities suited for this task.

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<sup>5</sup> Department of National Defence, *Canada First Defence Strategy* (Ottawa: Department of National Defence, 2008), 4; Department of National Defence, *Strong, Secure and Engaged . . .*, 17.

<sup>6</sup> Warner Rosalind. "Resilience or Relief . . .", 223.

<sup>7</sup> McCoy. *Why Canada needs . . .*, 4.

<sup>8</sup> Department of National Defence. *Canada in a New Maritime World: Leadmark 2050*. (Ottawa: Royal Canadian Navy, 2016), 12-13.

<sup>9</sup> Matsalla, Devon and Daniel Rivière. "Sustainment of Hasty Deployments: Lessons learned from Op HESTIA." *The Canadian Army Journal* 13, no. 3 (2010): 97.

<sup>10</sup> Canadian Naval Review. "Whose big honkin ships are those on the horizon?," last modified 28 January 2011, <http://www.navalreview.ca/2011/01/whose-big-honking-ships-are-those-on-the-horizon/>.

## The Utility of Amphibious Support Ships

5. The ability to load and transport significant amounts of supplies, personnel and vehicles in a short amount of time following a natural disaster has been a significant limitation for the CAF in HADR operations over the last fifteen years. The lack of this capability has stood as a force limiter for the CAF, and indeed, the Whole of Government (WOG) approach to NEO and HADR operations, as was seen during deployments to Haiti, Jamaica, the Dominican Republic, New Orleans and Lebanon.<sup>11</sup> The provision of disaster relief services and supplies to a country following a natural disaster or emergency situation is an equipment and materiel intensive operation. These deployments often require the transportation of heavy military equipment such as construction and transport vehicles, numerous shipping containers of military supplies, as well as countless pallets and containers of disaster relief supplies for use by the local population. The ability to quickly and efficiently move equipment and relief supplies into the recently disaster ravaged theatre is a key predictor towards success in any HADR scenario. This was demonstrated during Op UNISON in New Orleans in 2005, and again during Op HESTIA in 2010. In Haiti, the CAF was forced to charter two civilian cargo ships to carry over 200 shipping containers of supplies, and over 200 military vehicles, as the military airlift fleet was unsuited to deliver the sheer amount of required materials for the operation.<sup>12</sup> The chartering of civilian cargo ships, while useful during past HADR operations, should no longer be seen as a reliable solution for the transportation of equipment and supplies during future HADR operations. This is because the chartering of civilian vessels is a time consuming process which delays the arrival of the relief supplies, and also because civilian sea lift has become extremely costly, as the availability of civilian cargo capacity has decreased rapidly over the last ten years, with the cost for such services increasing by over forty percent.<sup>13</sup> Contrastingly, most amphibious support ships are capable of fulfilling these capability deficiencies, with most vessels capable of carrying several hundred vehicles, and thousands of tonnes of supplies. This heavy transport capability can be contrasted against the CAF's current largest cargo carrying platform, the CC-177 Globemaster, which is only capable of carrying 73 tonnes of cargo on a single trip.<sup>14</sup> The lack of the ability to organically transport large amounts of equipment and supplies during HADR deployments has hampered the effectiveness of the CAF's ability to effectively respond to disaster situations in the past. Amphibious support ships offer capabilities that would allow the CAF to respond to its' current lack of organic transport capability.

6. The lack of ability to organically unload and load cargo, supplies and personnel without the use of host nation facilities has created significant difficulties for the CAF during past HADR deployments. Following a disaster event, the transportation infrastructure of a nation is most often severely damaged, or even completely destroyed,

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<sup>11</sup> McCoy. *Why Canada needs . . .*, 4.

<sup>12</sup> Matsalla. "*Sustainment of Hasty Deployments . . .*", 90.

<sup>13</sup> McCoy. *Why Canada needs . . .*, 9.

<sup>14</sup> *Ibid*, 4-5.

and the transportation infrastructure that remains is often massively over tasked by the requirement to facilitate the inflow of personnel and relief supplies into the country. Following the 2010 earthquake in Haiti, the Port-au-Prince sea port facilities were damaged beyond use, and the Port-au-Prince airport, the primary large capacity airport in the nation, was so severely over tasked that the only flights allowed to land were those carrying key relief supplies, or evacuating injured personnel.<sup>15</sup> As a result, the CAF struggled to get supplies into the country while utilizing the C-177 fleet, resulting in significant delays in the arrival of relief supplies, ultimately requiring a dangerous and time consuming land move from the Dominican Republic. Difficulties associated with the landing of supplies were also encountered during Op UNISON in New Orleans in 2005 following Hurricane Katrina, where the CAF struggled to find a facility to land the relief supplies transported by a Canadian Coast Guard ship. By contrast, in Haiti, the US Navy (USN) brought a significant amount of their supplies and equipment into the country utilizing amphibious support ships from a Marine Expeditionary Unit (MEU), allowing them to land personnel, vehicles and equipment without relying on the already sparse physical infrastructure of the nation they had come to help.<sup>16</sup> Amphibious support ships provide the means of delivering personnel, equipment and supplies to an area of operations without reliance on physical infrastructure, either via organic helicopters, deployment of a floating pier or via the use of amphibious landing craft. The use of this capability in HADR operations would mean that the CAF could rapidly deploy the needed equipment, personnel and relief supplies to areas most in need of relief without having to first assess, repair and potentially secure local physical infrastructure facilities. As has been observed during numerous HADR deployments, (Haiti 2010, New Orleans 2005, New Zealand 2016 and Turks and Caicos 2018), the ability to organically land and transfer relief equipment and supplies to an affected nation, without reliance on host nation infrastructure, with the use of amphibious support ships, means that disaster relief services and supplies reach the affected population faster, more efficiently and with less disruption to the host nation.

7. The timely provision of emergency medical services is a key component of most of the HADR operations that the CAF is tasked to respond to. Following most disasters, the affected nation normally finds itself with a large quantity of emergency medical requirements and a national medical system that has been either severely damaged, or almost completely destroyed. Despite this priority, the CAF has struggled during previous HADR missions to rapidly deploy its' medical response capability, be that either through the DART, or through the deployment of a Canadian Field Hospital (CFH). The CAF's current deployable medical facility requires significant amounts of time to deploy and setup prior to commencing medical services, due to its' sheer size and the amount of physical supplies that need to be transported, and as was stated above, the small medical capability present on HMC ships is insufficient to undertake these operations. These

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<sup>15</sup> Matsalla. "*Sustainment of Hasty Deployments . . .*, 90. As a result of these restrictions Canada struggled to get clearance to bring components of the Field Hospital into the country and only managed to accomplish this by including donated Red Cross relief supplies on a DART transport flight in order to qualify as a disaster relief supplies delivery.

<sup>16</sup> Ibid, 100.

challenges were best illustrated in Haiti in 2010, where by the time the CAF medical response facility was established, the vast majority of earthquake related victims requiring medical support had either already died, or had received help elsewhere. In total, due to the 17 day delay in establishing a medical presence, the CAF response provided an extremely limited disaster relief medical service, with 20 surgical patients being operated on for issues linked to the earthquake, with all other patients being seen for pre-existing or non-earthquake related medical problems.<sup>17</sup> These difficulties can be contrasted with the USN response, utilizing medical facilities present on their amphibious support ships. These two ships were able to arrive within seven days, and commence serving the most severe medical cases on-board immediately, providing timely, much needed and lifesaving medical care to the disaster victims.<sup>18</sup> The flexible internal nature of amphibious support ships allows for advanced and pre-configured medical facilities to be supported, which allow for the immediate delivery of lifesaving medical care upon arrival.

### **Additional Uses of Amphibious Support Ships**

8. The flexible nature of amphibious support ships means that beyond their primary mission of providing support during HADR deployments, these vessels would provide the CAF with a multitude of additional capabilities. With a large multi-cultural and international population such as Canada with over 2.8 million citizens living abroad, the government is routinely called upon to assist in the evacuation of Canadian citizens around the world following insurrection, emergencies and other disasters, as has been done five times in the last 15 years.<sup>19</sup> Instead of relying upon chartered cruise ships, or allied assistance, as was done in Lebanon in 2006, amphibious support ships would provide the CAF with the assurance of being able to organically conduct these extractions. Additionally, such ships, with their cargo and vehicle carrying ability would provide the CAF with an organic joint sea lift capability that the CAF presently does not possess. This would alleviate the need for the chartering of commercial cargo transport as was done for the close out of the Afghanistan mission in 2014, as well as the opening and closing of the Mali Peace Keeping mission in 2018 and 2019. Lastly, such ships could function as floating Command and Control centres and mobile headquarters facilities for joint CAF operations, providing organic and self-contained support, communications and security for deployed command staffs such as the 1<sup>st</sup> Canadian Division, or during large scale domestic events such as the G7 summit or 2010 Olympics.<sup>20</sup> The capabilities provided by an amphibious support ship would allow the CAF to not only meet its' HADR mandate, but also contribute to the full spectrum of core CAF tasks assigned by the GC.

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<sup>17</sup> Talbot, Max et al. *"1<sup>st</sup> Canadian Field Hospital in Haiti . . .*, 272.

<sup>18</sup> *Ibid*, 272-274.

<sup>19</sup> McCoy. *Why Canada needs . . .*, 4.

<sup>20</sup> *Ibid*, 6.



## CONCLUSION

9. The GC has long mandated that the CAF be able to provide emergency assistance and disaster relief services both domestically and internationally as one of its' core tasks. Despite this, the CAF currently lacks any dedicated equipment needed to undertake these tasks with any level of proficiency. While the CAF has historically responded to HADR operations with significant resources and personnel, and earned international acclaim for its' efforts, the lack of equipment especially suited for these tasks has resulted in significant operational difficulties, and reduced provision of relief services during past HADR deployments. This lack of specialised equipment creates a strategic vulnerability wherein the CAF could be placed in the position of not being able to sufficiently respond to government requirements, and be seen to be lacking within the international community when called upon to conduct a large scale HADR operation. As was argued above, amphibious support ships contain the capabilities needed to address these deficiencies and would provide the CAF with the ability to move the required resources to the scene of a disaster in a quick and efficient manner. These ships would be able to land and support those forces without relying on host nation facilities and would enable the provision of medical services in a time frame that would allow for the maximum benefit and prevention of death and unnecessary suffering. The CAF currently lacks the capability to effectively respond to HADR deployments in a rapid and effective manner within the maritime environment, and this represents a strategic vulnerability in its' ability to successfully complete one its' eight core tasks.

## RECOMMENDATION

10. While the provision of an amphibious support capability for the CAF has been considered in the past, most notably under General Hillier and his desire for the CAF to acquire an amphibious warfare capability, the use of such ships for HADR operations has seldom been considered.<sup>21</sup> While previous investigations had focused entirely on militarised amphibious warships, such as the *Mistral* or *Wasp* class amphibious assault ships, the conversion of civilian container vessels into an amphibious support role has recently been undertaken by several of Canada's allies, a concept that significantly reduces the overall cost, complexity and crew requirements of such a project.<sup>22</sup> It is recommended that the CAF consider the acquisition of two such vessels, with one positioned on each coast, in order to provide the maximum flexibility for responding to international emergencies, as well as providing a joint capability for the support to general CAF operations.

Drafted by: LCdr Ryan Bell

Reviewed by: Director Naval Strategy (DNavStrat)

Prepared for: Director General Naval Force Development (DGNFD)

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<sup>21</sup> Canadian Naval Review. *Whose big honkin ships . . .*

<sup>22</sup> McCoy. *Why Canada needs . . .*, 7-8.

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