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JOINT OPERATIONS IN THE LITTORAL: HOW CAN THE ROYAL CANADIAN NAVY HELP?

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JOINT OPERATIONS IN THE LITTORAL: HOW CAN THE ROYAL CANADIAN NAVY HELP?

The Royal Canadian Navy is a medium global force projection navy. As per 1994 White Paper and reiterated in Leadmark, the Navy will maintain high quality, combat capable, interoperable and rapidly deployable task-tailored forces, ready to defend Canada and Canadian interests and values while contributing to international peace and security.

- *Leadmark 2020*

AIM

1. This service paper will highlight a number of capability gaps that exist for the Royal Canadian Navy (RCN) and the Canadian Armed Forces (CAF) in general in the littoral environment that is growing in complexity from a multitude of threats and operational requirements. As one of the most important aspects of joint operations for the RCN lies in the littoral, a number of options will be considered as to how the Navy can operate more jointly with the Canadian Army (CA) primarily but also with the Royal Canadian Air Force (RCAF) in the littoral. This paper will assess these options and recommend an approach, based on the likelihood of these options being implemented by the Government of Canada (GoC), as to how the Navy can operate more jointly with the Army in the area of the sea-land interface in both the near and long term. As with any military procurement, funding availability and whether the necessity can be adequately justified and communicated to the Canadian taxpayer as a realistic and valid requirement will be the main drivers of the decision.

INTRODUCTION

2. In 2006, there was significant effort by the RCN and the CAF to replace the recently decommissioned supply ships (HMCS PROTECTUER and PRESERVER) which were known as

the Auxiliary Oil Replenishment (AOR) vessels. The main mission of the AORs was to support and sustain a Naval Task Group at sea with fuel, spare parts, ammunition, food and other supplies. The planned replacement vessels under the Joint Support Ship (JSS) Project were to provide a more extensive amphibious and sea lift capability, in addition to the aforementioned roles, making them an asset in a joint environment with the CA and RCAF. Unfortunately, with a planned budget of three billion dollars and a list of requirements that far exceeded the one-for-one replacement of the AOR capability, the JSS Project was unaffordable in 2006 leading to a five year delay and a re-scoping of the JSS requirements.¹ Officially, the JSS that will be brought in to service in 2020 will have ‘limited’ sealift and ‘limited’ support to operations ashore capabilities. However, the extent that these vessels will be ‘joint enough’ to provide sufficient capability to the army remains questionable. Their utility in Disaster Relief (DR), Humanitarian Assistance (HA) or Non-Combatant Evacuation Operations (NEO) by the CAF and the GoC in terms of their medical facilities and ability to land forces and equipment ashore in an efficient manner will be woefully lacking.

3. Given that these new ships will be in service from delivery in 2020 until approximately 2045, and with drastically reduced capability for the army, how can the RCN enhance interoperability and jointness with the CA to make a significant contribution to mission success in the near and long term in the littorals? This becomes even more challenging given the prevalence of enhanced Anti-Access / Area Denial (A2/AD) weapons technology used by enemy forces so “stand-off” capability from the sea becomes a critical asset. As the following discussion focuses on the ability of the navy to support the Army in the littoral environment, it is important to define “littoral”. US Navy Doctrine defines the littoral as: “The area from the open

¹ Office of the Parliamentary Budget Officer. “Feasibility of Budget for Acquisition of Two Joint Support Ships”. 28 February 2013.

ocean to the shore which must be controlled to support operations ashore, and the area inland from shore that can be supported and defended directly from the sea.”²

DISCUSSION

4. In *Charting the Course from Leadmark*, the RCN places significant emphasis on sea-based joint operations stating that the RCN will integrate “maritime, land, air and Special Operations Forces (SOF) to provide focused effects”.³ The document also states that one of the key capabilities or roles of the RCN will be to: “Influence the battlespace in the littorals in support of Canada’s joint fighting forces.”⁴ Arguably, none of these aspects are being addressed in any meaningful manner at present in the current Halifax Class Frigate, the future Canadian Surface Combatant (CSC) which is its replacement, or the JSS. Despite the understanding that supporting the land forces and SOF is a key goal of the RCN, neither procurement of the required equipment or training of the skill sets required in doctrine or Force Generation (FG) seem to be at the required priority level to introduce the capability for actual joint operations. Various solutions to address the shortfalls in joint operations will be now be considered and these will enhance all the operational functions but mostly the command, sense and act components.

5. One option to improve joint operations with the army that has been investigated in the past is the procurement of an Amphibious Assault ship such as the Canberra Class (Australia) or Mistral Class (France) that would be used to provide front-line support to Army forces ashore.⁵ These ships have the ability to transport up to 1000 personnel, heavy-armoured vehicles, light-

² Stewart Fraser. *Littoral Warfare & Joint Maritime Operations: UK Approaches and Capabilities*. (CDISS, Lancaster University: Bailbrigg Memorandum 32. 1997), 9.

³ Department of National Defence, B-GN-007-000/AG-001. *Securing Canada’s Ocean Frontiers: Charting the Course From Leadmark* (Ottawa: DND Canada, 2005),20-25.

⁴ *Ibid.*, 28.

⁵ Options for Humanitarian and Disaster Relief Ships. RCN Briefing Note, August 2011.

armoured vehicles, and various landing craft to move troops and equipment ashore.⁶ In addition, these vessels would be multi-purpose in that they could be retrofitted for improved DR, HA or NEO. Since the JSS Statement of Requirements (SOR) has already been approved and reflects only a replacement of existing capability, none of these additional aspects (DR/HA, NEO or troop landing) will be delivered with any real level of capability except in an ad hoc fashion. If a limited amphibious capability is desirable, then it can only be addressed in a new procurement 'after JSS. Furthermore, it is thought that the procurement of an amphibious ship would have to be primarily focused on HA/DR or medical support if it is to have any chance of being approved by government. Although this would be the ideal way to support joint operations with the CA, this option would only be realistic for Horizon 3(15-30 years out). The remainder of this paper will consider the ways the RCN can support the Army in Horizon 1 (0-5 years) and Horizon 2 (5-15 years). An expensive procurement (estimated at 2 billion dollars) and the lack of army and navy experience in actual amphibious operations make the procurement of an Amphibious Assault vessel problematic at best.

6. The key area where joint operations with the CA can be implemented in the near term is by projecting naval power ashore through Naval Fire Support (NFS) or Naval Gunfire Support (NGS). The role of NFS has not changed since WWII and still essentially involves the following three missions: "1. prepare an objective for assault and to cover the initial landing 2. bridge the gap until land based artillery is established and 3. reinforce and thicken other supporting fires."⁷ The first two missions would be useful in supporting combined operations with other nations until Canada acquires amphibious capability, however the latter, which could be expanded to include the striking of targets of opportunity ashore such as Anti-Air Defence or Anti-Ship

⁶ *Ibid.*, Annex A-D.

⁷ Maj R. D. Heintz, Jr. Naval Gunfire Support in Landings. (Marine Corps Gazette 97, no. 4: 2013): 37.

Missile (ASM) systems, could be implemented in the near term by adding Land Attack Missiles (LAMs) or larger calibre guns to existing and future platforms within Horizons 1 and 2.

7. The first option for NFS would be to retrofit larger calibre guns in both the Halifax Class and CSC platforms. As these guns would also fill the Anti-Air warfare (AAW) defensive role of the ship, there will be critical trade-offs between the calibre of the gun, the explosive content and type of ammunition used. Many Navies (e.g. US, Royal Navy) estimate that a 5-inch gun would provide effective AAW and NFS capability given modern arming and fusing mechanisms combined with the explosive content.⁸ NFS could be enabled by CA or SOF forces ashore for targeting, which would enable emission control silence from the ship, making it less susceptible to ASMs from shore. Additionally, inorganic targeting information from such systems as the Global Command and Control System (GCCS) could be received by the ship as well. As the RCN and CA have not practiced NFS in decades, there would be a steep learning curve coordinating Navy /Army in joint fires targeting. The cost of a system such as the MK 45 5-inch Gun System would not be significantly more than the gun mounts already in use by the RCN and the range achieved for NFS are over 20nm with extended range rounds in development that could extend this to 60nm.⁹

8. Another option for NFS would be to provide precision strike via LAMs such as that used by the US Navy (i.e Tomahawk LAM). The AGM-84 Harpoon Stand-Off LAM (SLAM) would be worth investigating as Canada already has a supply arrangement through a Foreign Military Sales (FMS) Case for the Harpoon missile and the doctrine and capability to use it. The current

⁸ Stewart Fraser. *Littoral Warfare & Joint Maritime Operations: UK Approaches and Capabilities*. (CDISS, Lancaster University: Bailbrigg Memorandum 32. 1997), 34.

⁹ *Mk 45 Mod 4 Naval Gun System*. <http://www.baesystems.com/en/product/mk-45-mod-4-naval-gun-system>

range of the Harpoon is approximately 60nm with extended range out to 120nm.¹⁰ The power projection and influence that the navy could provide ashore using army or SOF for targeting could have a major impact with a low cost footprint. Take for example, the immense logistical support ashore required for sustaining CF18 aircraft in bombing targets in foreign states. To maintain six CF 18 Hornets on continuous bombing runs in *Operation Impact* had a logistical support footprint of over 600 personnel.¹¹ Although limited in the distance they can project power from the littoral, Naval platforms could provide a rapidly deployed and sustained operation anywhere in the world without the complexity of getting approval to use another nation's sovereign lands for staging operations.

9. *Leadmark* addresses the intent to have the “right force at the right place at the right time” and the need to “respond quickly in the littoral and quickly assume joint operations”.¹² This is a role that could be completed by the Navy using Harpoon missiles. It is important to note that there are limitations with LAMs, such as the resupply and storage of sufficient quantities of missiles that must be overcome for this to be viable. Using submarine launched land attack missiles in the current Victoria Class submarines would be an option, although an expensive and politically unachievable one. It would be realistic, however, to look at introducing the capability in any future replacement submarines. With the focus and importance on the littoral, it would be difficult to defend the choice of an anti-ship torpedo as the only weapon embarked in a submarine.

¹⁰ *Concept for Naval Fire Support*. Version 1.0 (25 Feb 13). NDHQ Ottawa, Canada.

¹¹ <http://news.nationalpost.com/news/canada/canada-vs-isis-ten-things-to-know-about-the-combat-mission-in-iraq>

¹² Department of National Defence, B-GN-007-000/AG-001. *Securing Canada's Ocean Frontiers: Charting the Course From Leadmark* (Ottawa: DND Canada, 2005),25.

10. Whether NFS is pursued through LAMs or Gun systems, either option allows joint operations with the army in addition to applying the tenets of sea power including: Combat Operations against the land, blockade, and interdiction operations. Although not the focus here, Uninhabited Aerial Vehicles (UAVs) controlled by the ship could be used to extend the range of naval platforms and enhance the ability of the RCN to exercise sea control and sea denial in the littorals through reconnaissance and payload delivery. All of these capabilities support the National Security Policy (NSP) which highlights the need to protect Canadians abroad and to contribute to international security.¹³ Furthermore, the Navy's *Leadmark* highlights that in the Future Security Environment (FSE) "the specific nature of any given conflict will be uncertain in terms of location and the nature of the opponents" and that action could be required by Canada with little or no prior warning".¹⁴ The flexibility provided by sea power in supporting the Army is the best means to ensure a rapid response to a conflict in the littoral.

CONCLUSION

11. There are a number of ways that the RCN can work more jointly with the land forces in the littoral and it is critical to find a way to coordinate both an immediate and a longer term joint capability that involves the procurement of equipment and joint training specifically related to directing joint fires from sea to shore. The global naval operating environment will be more complex in the future, requiring simultaneous response across the entire spectrum of conflict including combat, stabilization and humanitarian relief operations.¹⁵ The RCN would be best served to balance the level of ambition, the ever present funding limitations and the political will

¹³ *Ibid.*,7.

¹⁴ Department of National Defence, B-GN-007-000/AG-001. *Securing Canada's Ocean Frontiers: Charting the Course From Leadmark* (Ottawa: DND Canada, 2005),13.

¹⁵ *Ibid.*,15.

‘of the people’ in pursuing a course of action in the littoral environment that improves joint operations with the CA and the RCAF.

12. Joint capability using NFS could be introduced within the next five years into existing naval platforms, using SOF or the Army for targeting. In support of Canadian Foreign Policy objectives such as NEO, HA, DR, it would be feasible for Canada to pursue a multi-purpose amphibious capability in the future as long as the landing of troops ashore in an offensive campaign is not the primary role.

RECOMMENDATIONS

13. The way forward for the RCN to improve the naval contribution to joint operations in the littoral by supporting land forces ashore, requires a multi-tiered and phased approach. Longer term and alongside the other services (CA and RCAF), the RCN needs to pursue the procurement of a jointly funded amphibious capable platform that primarily allows for the movement of personnel and equipment to remote locations globally and serves as an enabler for HA, DR and NEO. This capital project should be joint throughout all project phases including requirements definition, design and development, implementation, force generation and both tactics and doctrine development. It is contested that this project will only be approved by the GoC if the primary role is humanitarian while the secondary roles can be amphibious troop and equipment transport.

14. To have an immediate impact on joint operations in the littoral in the near term the RCN needs to work with CA and the RCAF in the development of joint doctrine and the procurement of NFS systems for current and future naval platforms. Using the already existing capability to land SOF ashore from any platform, the RCN can expand on their ability to project power ashore

by using either land attack missiles (e.g. extended range harpoon missile) or higher calibre (i.e 5-inch) naval guns to provide NFS while using CA/SOF for joint targeting. It is recommended that one or both of these NFS systems, which would be dual purpose for AAW and ASW defence of the ship, should be implemented in the Halifax Class and future CSC. If funding becomes a roadblock, ship-based UAVs that could be used for reconnaissance or payload delivery should be investigated. Any of these options would allow the RCN and the CA to start working more jointly prior to a more comprehensive amphibious capability being introduced.

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